

004

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL ☒ DEEPEN ☐  
1b. TYPE OF WELL  
OIL GAS SINGLE MULTIPLE  
WELL ☒ WELL ☐ OTHER ☐ ZONE ☒ ZONE ☐

2. NAME OF OPERATOR

Inland Production Company

3. ADDRESS OF OPERATOR

Route #3 Box 3630, Myton, UT 84052

Phone: (435) 646-3721

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*

At Surface NE/SW

2007' FSL 1996' FWL

At proposed Prod. Zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

Approximately 20.8 miles southeast of Myton, Utah

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY  
OR LEASE LINE, FT. (Also to

Approx. 633' f/lse line

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL,  
DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT.

Approx. 1193'

16. NO. OF ACRES IN LEASE

277.52

17. NO. OF ACRES ASSIGNED TO THIS WELL

40

19. PROPOSED DEPTH

6500'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

4982.5' GR

22. APPROX. DATE WORK WILL START\*

1st Quarter 2002

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT/FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Refer to Monument Butte Field SOP's Drilling Program/Casing Design				

Inland Production Company proposes to drill this well in accordance with the attached exhibits.

The Conditions of Approval are also attached.

COPY

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM : If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone.  
If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

*Marcia Coxie*

TITLE

Permit Clerk

DATE

2/1/02

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject-lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

TITLE

DATE

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



February 1, 2002

State of Utah  
Division of Oil, Gas & Mining  
Attn: Brad Hill  
1594 West North Temple - Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Applications for Permit to Drill: 1-31-8-18, 2-31-8-18, 3-31-8-18, 4-31-8-18,  
5-31-8-18, 6-31-8-18, 7-31-8-18, 11-31-8-18, 12-31-8-18, and 13-31-8-18.

Dear Brad:

Enclosed find APD's on the above referenced wells. If you have any questions, feel free to give either Brad or myself a call.

Sincerely,

  
Mandie Crozier  
Permit Clerk

mc  
enclosures

**RECEIVED**

FEB 04 2002

**DIVISION OF  
OIL, GAS AND MINING**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**001**

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

1a. TYPE OF WORK **DRILL** ☒ **DEEPEN** ☐

1b. TYPE OF WELL  
OIL WELL ☒ GAS WELL ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☒

2. NAME OF OPERATOR  
**Inland Production Company**

3. ADDRESS OF OPERATOR  
**Route #3 Box 3630, Myton, UT 84052** Phone: **(435) 646-3721**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At Surface **NE/SW 2007' FSL 1996' FWL** **443/0147 Y**  
At proposed Prod. Zone **590588 X**

5. LEASE DESIGNATION AND SERIAL NO.  
**UTU-74404**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
**N/A**

7. UNIT AGREEMENT NAME  
**N/A**

8. FARM OR LEASE NAME WELL NO  
**11-31-8-18**

9. API WELL NO.

10. FIELD AND POOL OR WILDCAT  
**Monument Butte Eight Mile Flat North**

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA  
**NE/SW Sec. 31, T8S, R18E**

12. County  
**Uintah**

13. STATE  
**UT**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**Approximately 20.8 miles southeast of Myton, Utah**

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**6500'**

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**Rotary**

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**1st Quarter 2002**

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<b>Refer to Monument Butte Field SOP's Drilling Program/Casing Design</b>				

Inland Production Company proposes to drill this well in accordance with the attached exhibits.

The Conditions of Approval are also attached.

FILED  
43-047-34501  
DIVISION OF  
OIL AND GAS AND MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM : If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone.  
If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Mandis Crozier TITLE Permit Clerk DATE 2/1/02  
(This space for Federal or State office use)

PERMIT NO. 43-047-34501

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY Bradley G. Hill TITLE RECLAMATION SPECIALIST III DATE 02-14-02

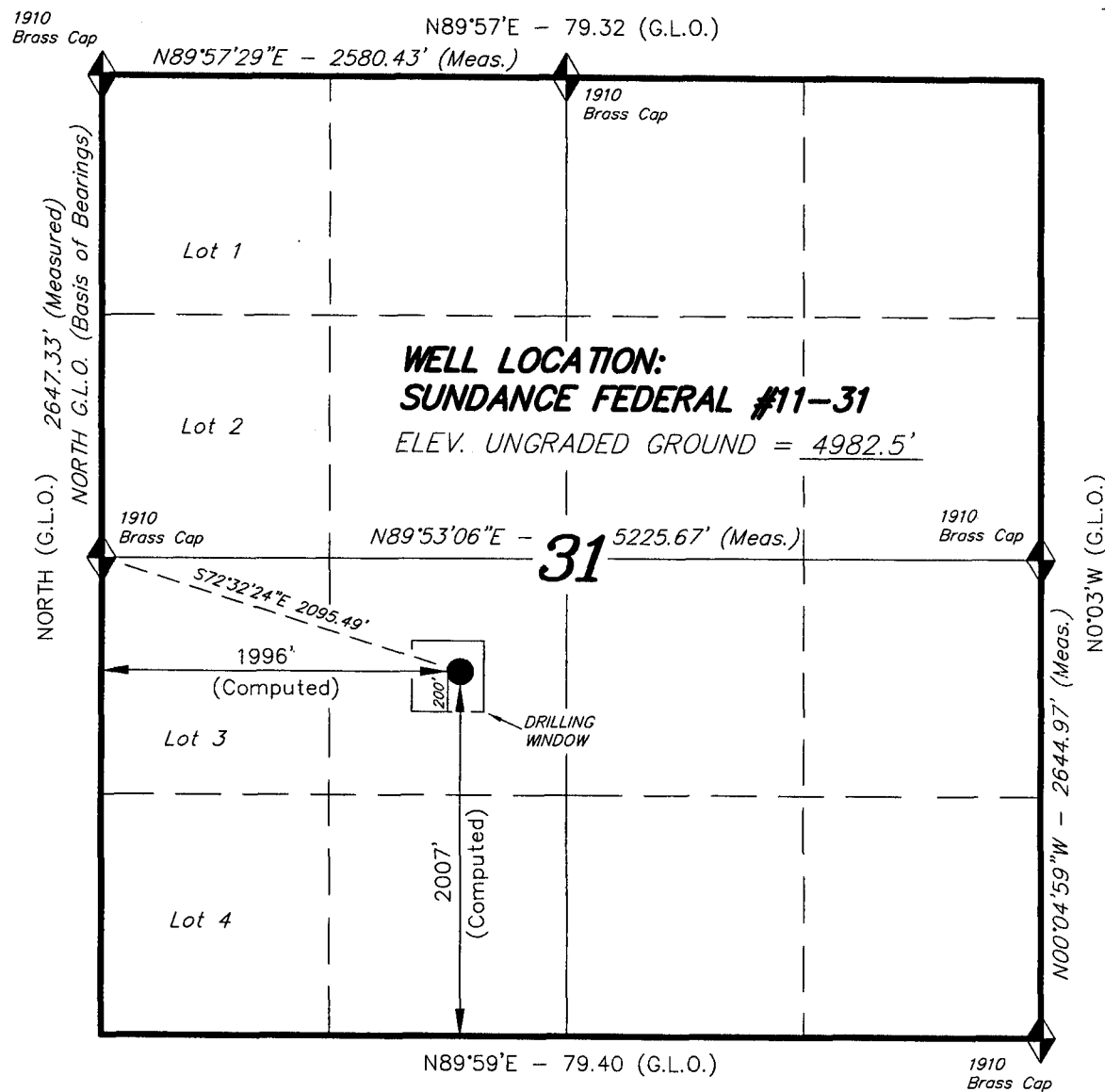
\*See Instructions On Reverse Side

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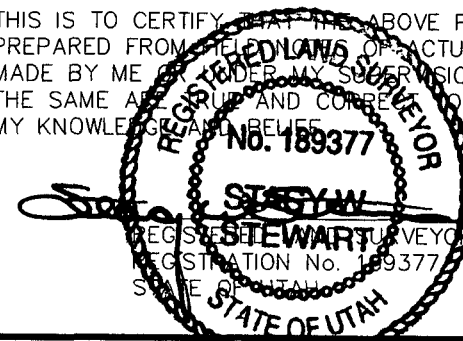
**T8S, R18E, S.L.B.&M.**

**INLAND PRODUCTION COMPANY**

WELL LOCATION, SUNDANCE FEDERAL  
#11-31, LOCATED AS SHOWN IN THE NE  
1/4 SW 1/4 OF SECTION 31, T8S, R18E,  
S.L.B.&M. UTAH COUNTY, UTAH.



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF.



◆ = SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (PARIETTE DRAW SW)

**TRI STATE LAND SURVEYING & CONSULTING**  
38 WEST 100 NORTH - VERNAL, UTAH 84078  
(435) 781-2501

SCALE: 1" = 1000'

SURVEYED BY: D.J.S.

DATE: 12-31-01

DRAWN BY: J.R.S.

NOTES:

FILE #



Well No.: Sundance 11-31-8-18

CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Inland Production Company

Well Name & Number: Sundance 11-31-8-18

API Number:

Lease Number: UTU-74404

Location: NE/SW Sec. 31, T8S R18E

**SURFACE USE PROGRAM**  
**CONDITIONS OF APPROVAL**

**CULTURAL RESOURCES**

See *DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION* (Fall 1994).

**PALEONTOLOGICAL RESOURCES**

See *DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION* (Fall 1994).

**SOILS, WATERSHEDS, AND FLOODPLAINS**

See *DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION* (Fall 1994).

**WILDLIFE AND FISHERIES**

See *DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION* (Fall 1994).

**THREATENED, ENDANGERED, AND OTHER SENSITIVE SPECIES**

**FERRUGINOUS HAWK:** Due to this proposed well location's proximity (less than 0.5 mile) to an existing inactive ferruginous hawk nest site, no new construction or surface disturbing activities will be allowed between February 1 and May 30. If the nest remains inactive on May 30<sup>th</sup> (based on a pre-construction survey by a qualified biologist), the operator may construct and drill the location after that date. If the nest site becomes active prior to May 30, no new construction or surface disturbing activities will be allowed within 0.5 mile of the nest until the nest becomes inactive for two full breeding seasons. In the event that this well becomes a producing well, it must be equipped with a multi-cylinder engine or hospital muffler to reduce noise levels.

**HOOKLESS CACTUS:** Due to the location being proposed in known Uinta Basin Hookless Cactus habitat, a pre-construction survey of the access road and well pad must be conducted by a qualified biologist. Known locations of Uinta Basin

Hookless Cactus must be avoided. If all plants cannot be avoided, further coordination with BLM will be required prior to construction to ensure compliance with the USFWS Biological Opinion for this project dated November 17, 1999.

#### **LOCATION AND RESERVE PIT RECLAMATION**

During construction of the reserve pit, a small amount of topsoil shall be stockpiled nearby, to be spread over the reserve pit area at the time the reserve pit is reclaimed.

The topsoil stockpile shall be reseeded immediately after site construction by broadcasting the seed, then walking the topsoil stockpile with the dozer to plant the seed.

The following seed mixture will be used on the topsoil stockpile, the recontoured surface of the reserve pit, and for final reclamation: (All poundages are in pure live seed)

Gardner saltbush	<i>Atriplex gardneri</i>	3 lbs/acre
Mat saltbush	<i>Atriplex corrugata</i>	3 lbs/acre
Galletta grass	<i>Hilaria jamesii</i>	3 lbs/acre
Indian ricegrass	<i>Oryzopsis hymenoides</i>	3 lbs/acre

The reserve pit shall be reclaimed immediately after drilling operations have ceased. The pit shall be reclaimed by: 1) removing all liquids and any oily debris according to Utah Division of Oil, Gas, & Mining pit closure rules; 2) perforating and folding the liner in place (if a pit liner is used); 3) recontouring the surface; 4) broadcasting the seed over the recontoured surface; and 5) walking the surface of the pit with a dozer to plant the seed.

At the time of final abandonment, the location and access will be recontoured to natural topography and topsoil spread over the area and the surface seeded immediately.

#### **PIPELINES**

Installation of a surface gas pipeline and/or any subsequent buried gas or water pipelines will follow the conditions of approval outlined above.

Except as specified in the APD, the installation of the surface gas line and any subsequent buried pipelines will follow the edge of the existing roadways without interfering with the normal travel and maintenance of the roadway.

The installation of any buried pipelines will disturb as little surface as possible and will not exceed 60 feet in width. Reclamation of the disturbance area associated with buried pipelines will be completed within 10 days after installation. The surface will be recontoured to natural or near natural contours. Reseeding will be with the same seed mixture specified for reclamation of the reserve pit and well site. The interface of the buried line disturbance area and the edge of any adjacent access roads will be constructed with a borrow ditch and road berm to minimize vehicular travel along the water line route.

INLAND PRODUCTION COMPANY  
SUNDANCE #11-31-8-18  
NE/SW SECTION 31, T8S, R18E  
UINTAH COUNTY, UTAH

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. GEOLOGIC SURFACE FORMATION:

Uinta formation of Upper Eocene Age

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

Uinta	0' – 1640'
Green River	1640'
Wasatch	6500'

3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS:

Green River Formation 1640' – 6500' - Oil

4. PROPOSED CASING PROGRAM

Please refer to the Monument Butte Field Standard Operation Procedure (SOP).

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Please refer to the Monument Butte Field SOP. See Exhibit "C".

6. TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:

Please refer to the Monument Butte Field SOP.

7. AUXILIARY SAFETY EQUIPMENT TO BE USED:

Please refer to the Monument Butte Field SOP.

8. TESTING, LOGGING AND CORING PROGRAMS:

Please refer to the Monument Butte Field SOP.

9. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:

The anticipated maximum bottom hole pressure is 2000 psi. It is not anticipated that abnormal temperatures will be encountered.

10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:

Please refer to the Monument Butte Field SOP.

INLAND PRODUCTION COMPANY  
SUNDANCE #11-31-8-18  
NE/SW SECTION 31, T8S, R18E  
UINTAH COUNTY, UTAH

ONSHORE ORDER NO. 1

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

1. **EXISTING ROADS**

See attached Topographic Map "A"

To reach Inland Production Company well location site Sundance #11-31-8-18 located in the NE ¼ SW ¼ Section 31, T8S, R18E, Uintah County, Utah:

Proceed southwesterly out of Myton, Utah along Highway 40 - 1.6 miles ± to the junction of this highway and UT State Hwy 53; proceed southeasterly along Hwy 53 - 13.8 miles ± to it's junction with an existing road to the north; proceed northerly - 0.3 miles ± to it's junction with an existing road to the northeast; proceed northeasterly - 5.1 miles ± to it's junction with the beginning of the proposed access road; proceed southwesterly along the proposed access road - 1360' ± to the proposed well location.

2. **PLANNED ACCESS ROAD**

See Topographic Map "B" for the location of the proposed access road.

3. **LOCATION OF EXISTING WELLS**

Refer to Exhibit "B".

4. **LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

Please refer to the Monument Butte Field Standard Operating Procedure (SOP).

5. **LOCATION AND TYPE OF WATER SUPPLY**

Please refer to the Monument Butte Field SOP. See Exhibit "A".

6. **SOURCE OF CONSTRUCTION MATERIALS**

Please refer to the Monument Butte Field SOP.

7. **METHODS FOR HANDLING WASTE DISPOSAL**

Please refer to the Monument Butte Field SOP.

8. **ANCILLARY FACILITIES**

Please refer to the Monument Butte Field SOP.

9. **WELL SITE LAYOUT**

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

10. PLANS FOR RESTORATION OF SURFACE

Please refer to the Monument Butte Field SOP.

11. SURFACE OWNERSHIP - Bureau Of Land Management

12. OTHER ADDITIONAL INFORMATION

Archaeological Resource Survey for this area is attached.

The Paleontological Resource Survey will be forthcoming.

Inland Production Company requests a 60' ROW for the Sundance #11-31-8-18 to allow for construction of a 6" gas gathering line, and a 3" poly fuel gas line. Both lines will tie in to the existing pipeline infrastructure. **Refer to Topographic Map "C."**

Inland Production Company also requests a 60' ROW be granted for the Sundance #11-31-8-18 to allow for construction of a 3" steel water injection line and a 3" poly water return line. **Refer to Topographic Map "C."**

**Water Disposal**

Formation water is produced to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Inland's secondary recovery project.

Water not meeting quality criteria, is disposed at Inland's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

13. LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION

Representative

Name: Brad Mecham  
Address: Route #3 Box 3630  
Myton, UT 84052  
Telephone: (435) 646-3721

Certification

Please be advised that INLAND PRODUCTION COMPANY is considered to be the operator of well #11-31-8-18 NE/SW Section 31, Township 8S, Range 18E: Lease UTU-74404 Uintah County, Utah: and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4488944.

I hereby certify that the proposed drillsite and access route have been inspected, and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Inland Production Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

2/1/02

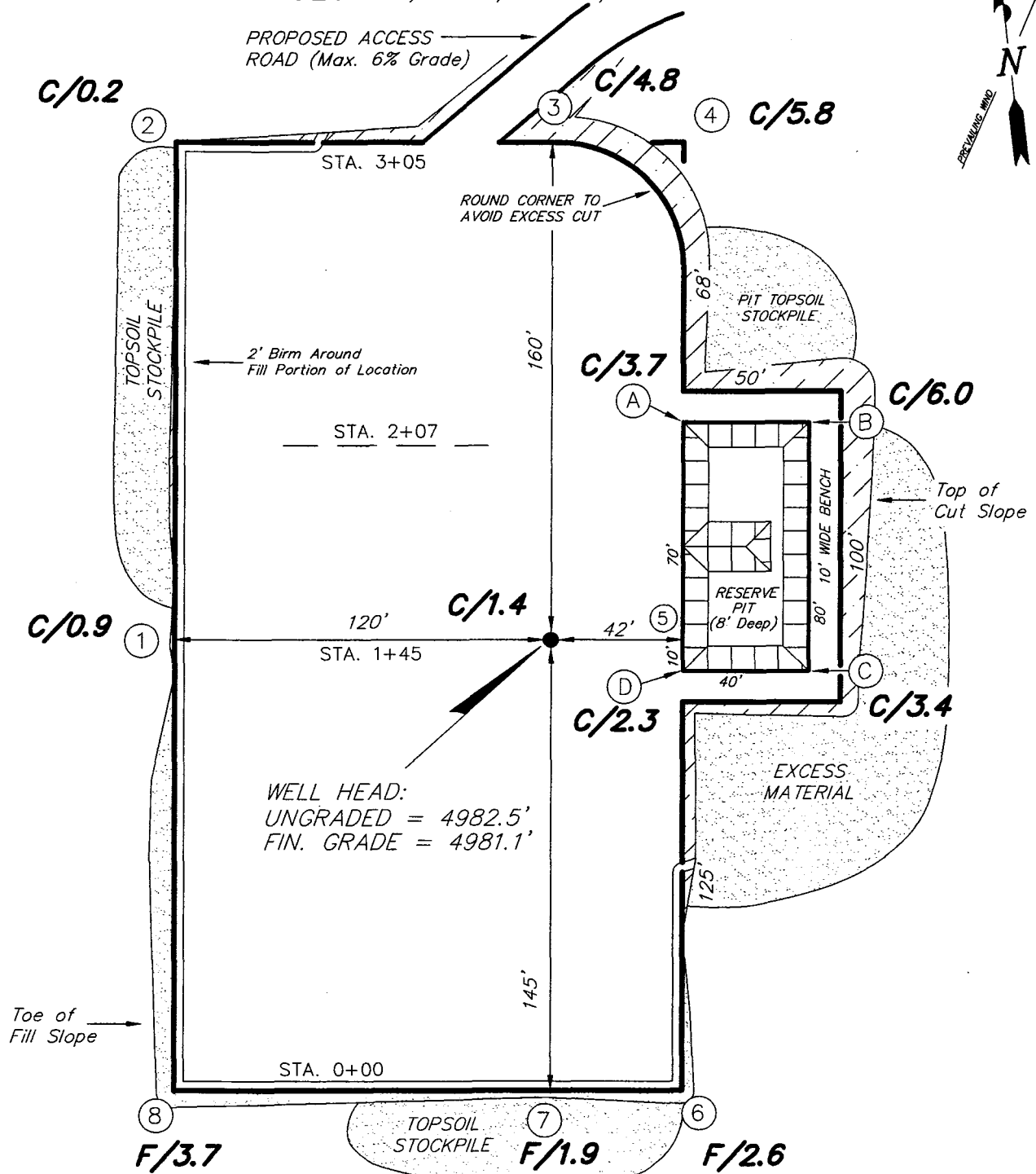
Date

Mandie Crozier

Mandie Crozier  
Permit Clerk

# INLAND PRODUCTION COMPANY

SUNDANCE FEDERAL #11-31  
SEC. 31, T8S, R18E, S.L.B.&M.



## REFERENCE POINTS

210' NORTH = 4988.5'  
260' NORTH = 4987.4'

SURVEYED BY: D.J.S.

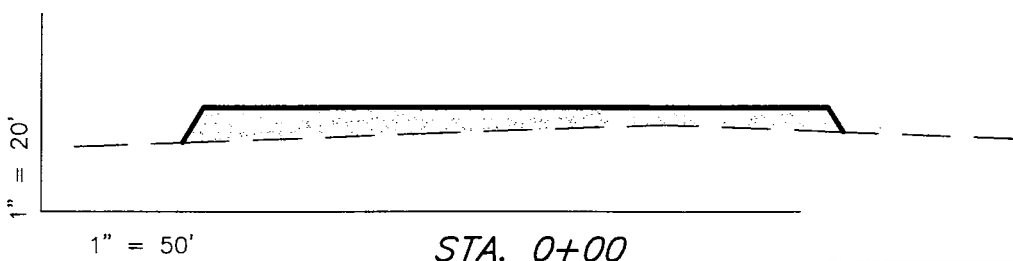
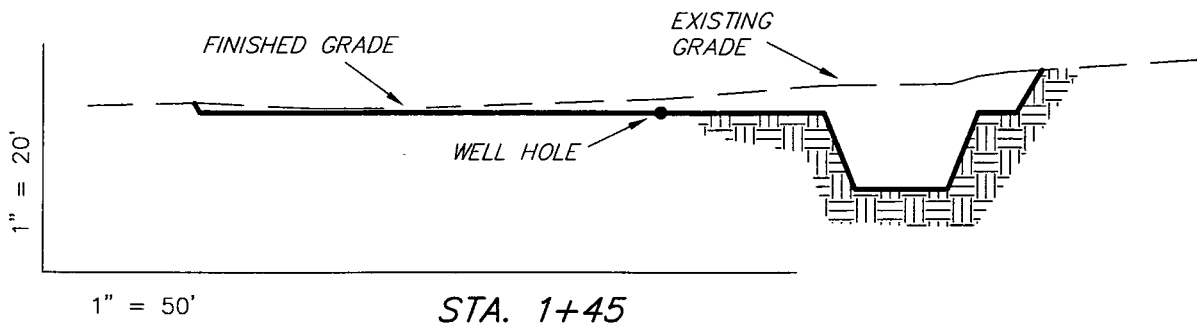
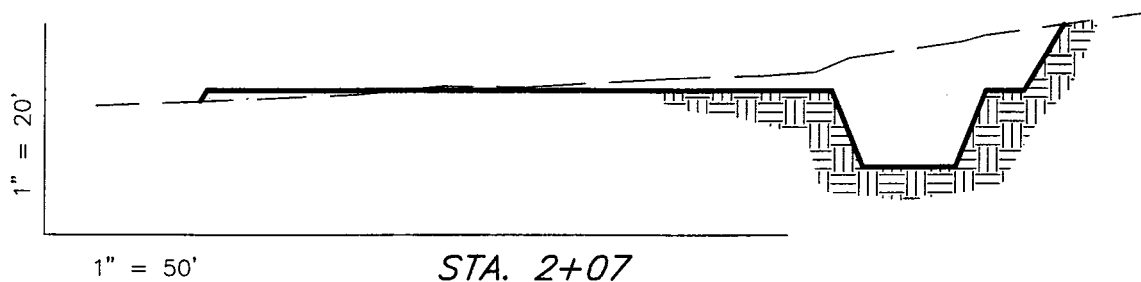
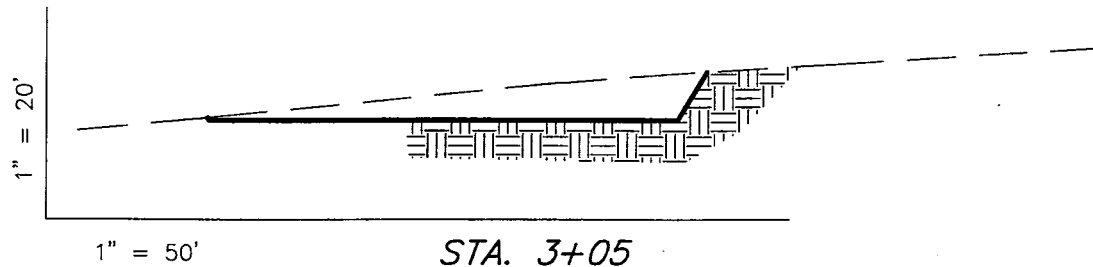
SCALE: 1" = 50'

DRAWN BY: J.R.S.

DATE: 12-31-01

**Tri State**  
Land Surveying, Inc.  
(435) 781-2501  
38 WEST 100 NORTH VERNAL, UTAH 84078

**INLAND PRODUCTION COMPANY**  
**CROSS SECTIONS**  
**SUNDANCE FEDERAL #11-31**



NOTE:  
 UNLESS OTHERWISE NOTED  
 ALL CUT/FILL SLOPES ARE  
 AT 1.5:1

**ESTIMATED EARTHWORK QUANTITIES**  
 (Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	1,980	1,980	Topsoil is not included in Pad Cut	0
PIT	640	0		640
TOTALS	2,620	1,980	1,010	640

SURVEYED BY: D.J.S.

SCALE: 1" = 50'

DRAWN BY: J.R.S.

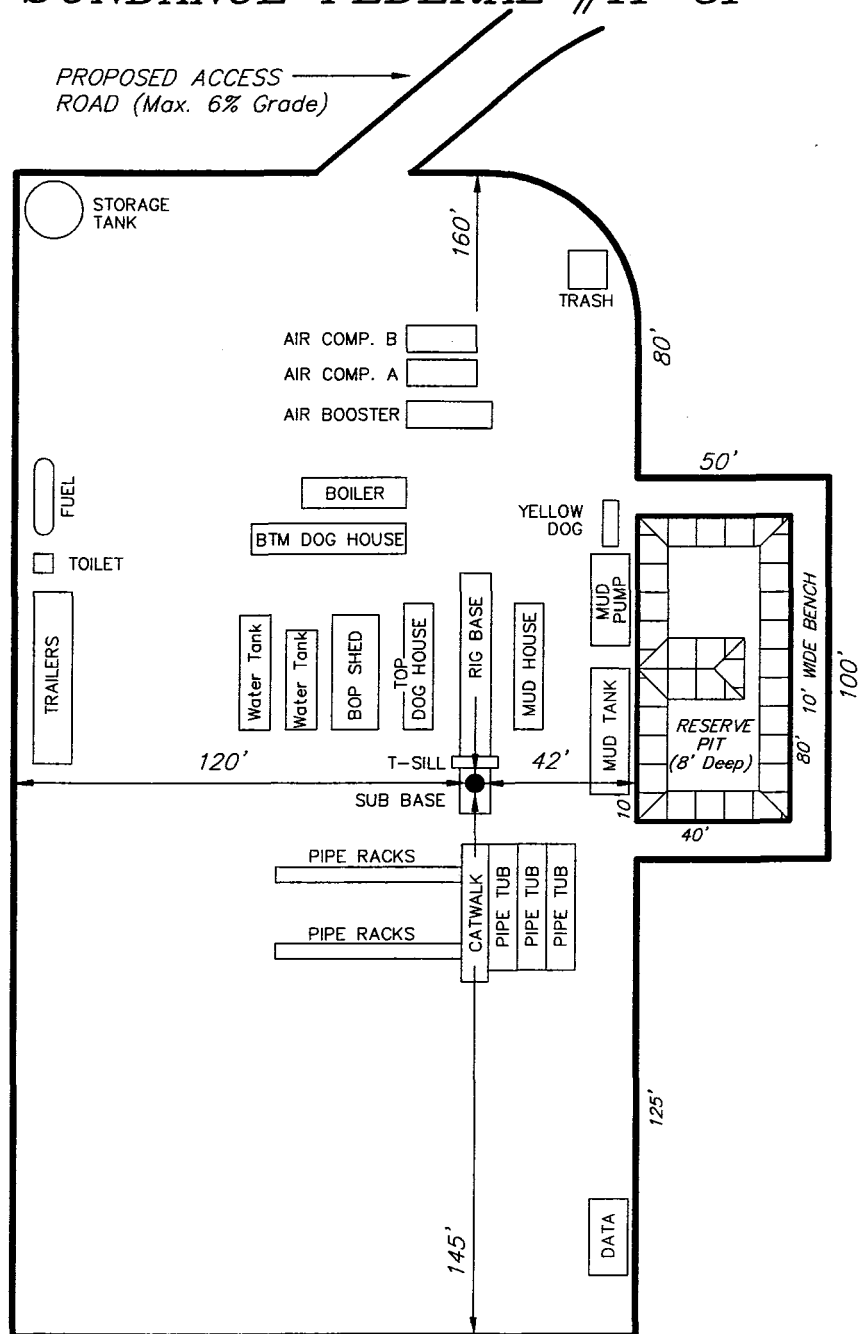
DATE: 12-31-01

**Tri State**  
 Land Surveying, Inc.  
 38 WEST 100 NORTH VERNAL, UTAH 84078  
 (435) 781-2501

# INLAND PRODUCTION COMPANY

## TYPICAL RIG LAYOUT

### SUNDANCE FEDERAL #11-31



SURVEYED BY: D.J.S.

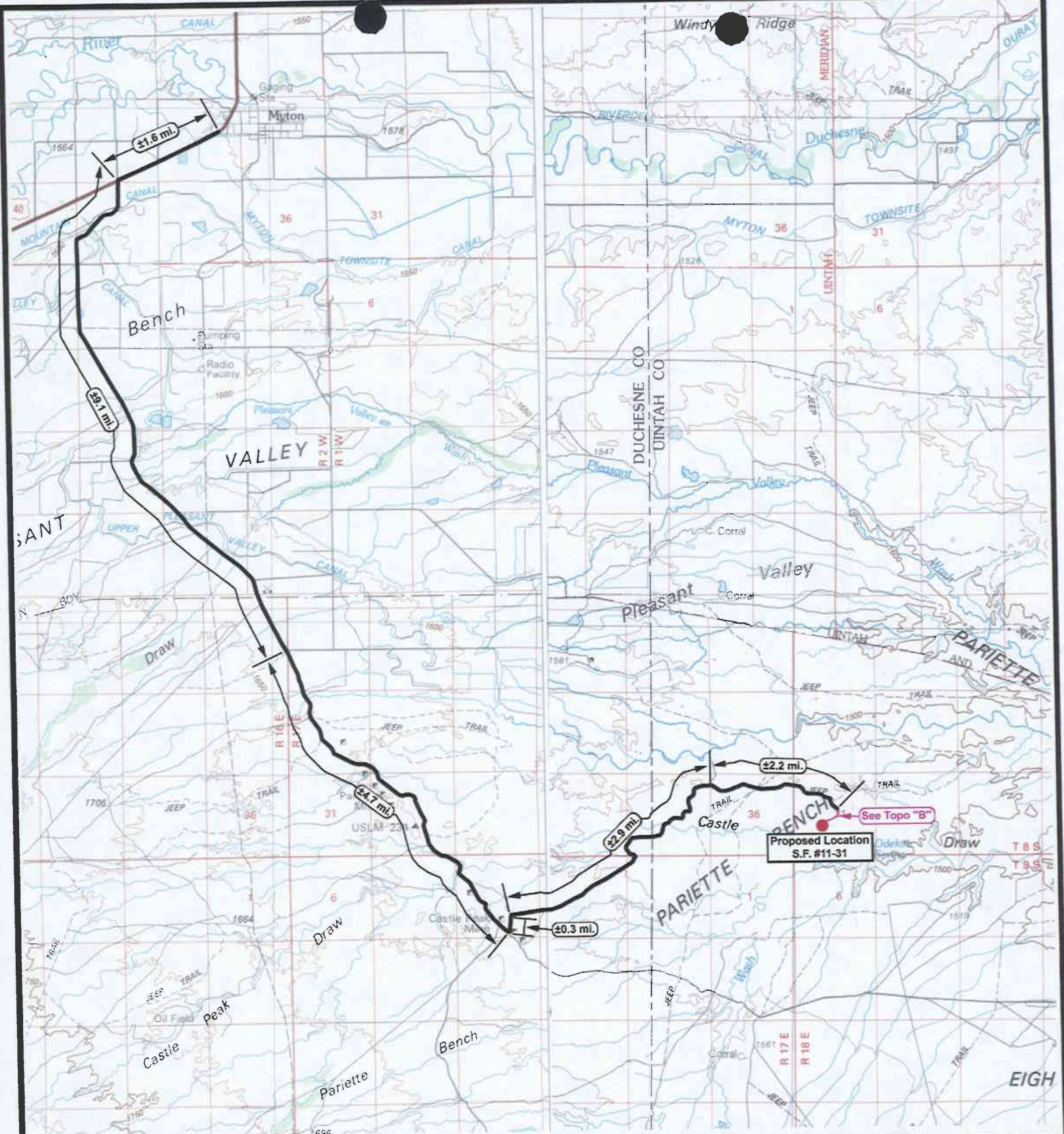
SCALE: 1" = 50'

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**Tri State**  
Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078  
(435) 781-2501





**Sundance Federal #11-31  
SEC. 31, T8S, R18E, S.L.B.&M.**



**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
38 West 100 North Vernal, Utah 84078

SCALE: 1" = 100,000'  
DRAWN BY: D.J.  
DATE: 01-02-2002

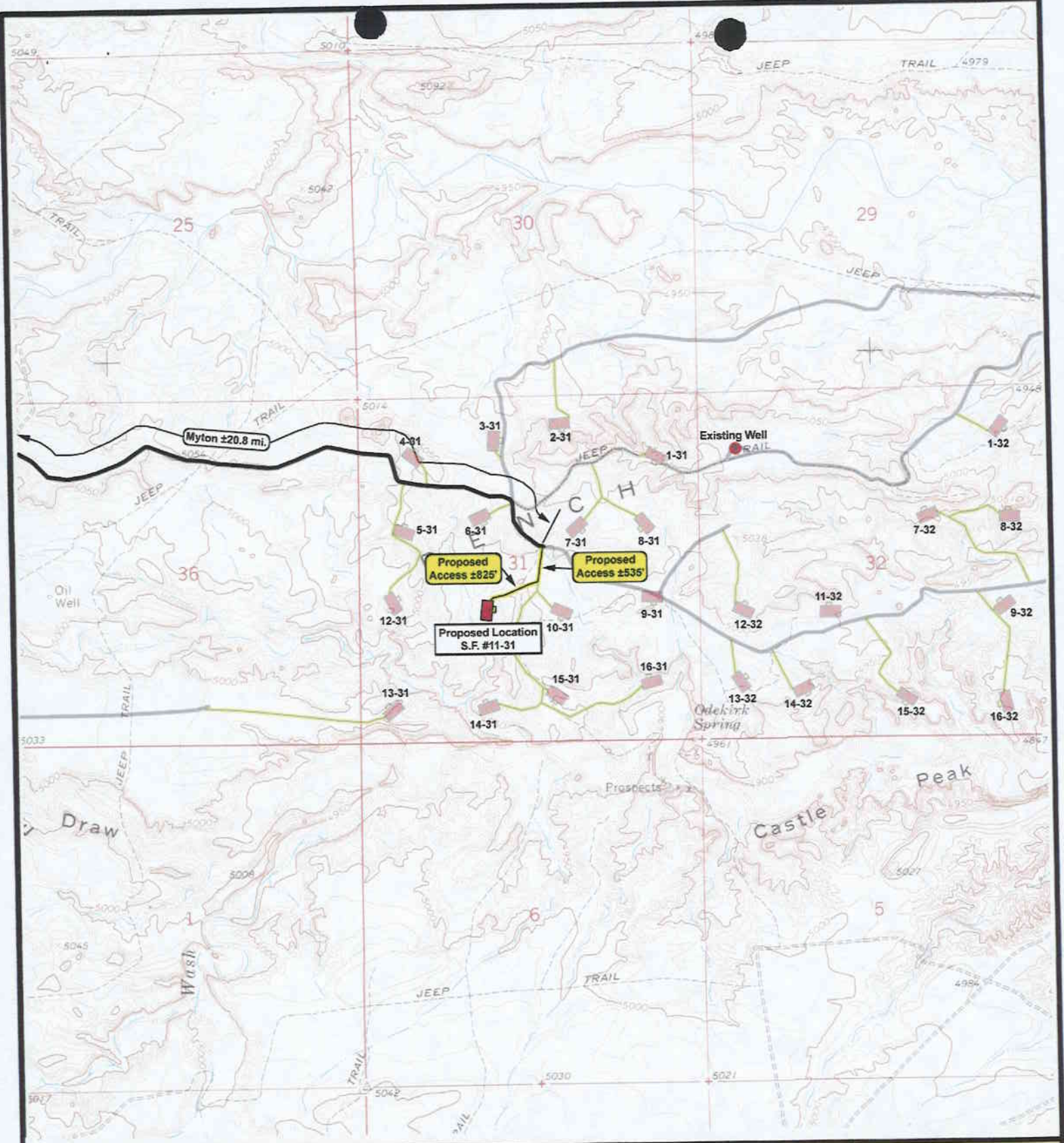
**Legend**

— Existing Road  
— Proposed Access

TOPOGRAPHIC MAP

**"A"**





**Sundance Federal #11-31  
SEC. 31, T8S, R18E S.L.B.&M.**



**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
38 West 100 North Vernal, Utah 84078

SCALE: 1" = 2000'  
DRAWN BY: D.J.  
DATE: 01-02-2002

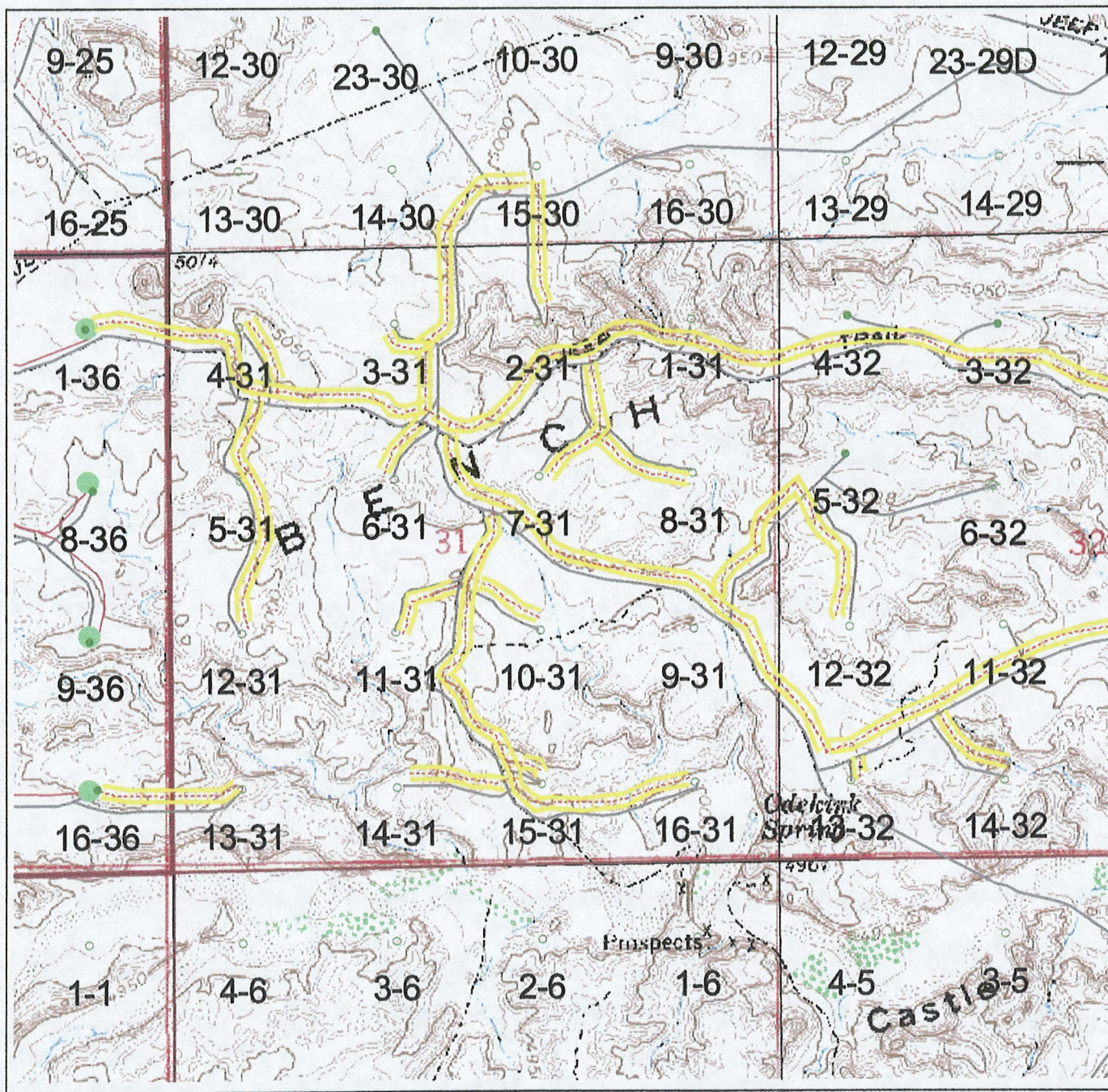
**Legend**

- Existing Road
- Proposed Access
- Access to be Upgraded

TOPOGRAPHIC MAP

**"B"**





Gas Line ROW

○ Pending Approval

● ROW Approved

■ Compressor Stations

Gas Pipelines

— 10"

— 6" Source Line

— 6" Proposed

— 4" Source Line

— 4" Proposed

— Gas Buried

— Petroglyph Gas Line

— Questar Gas Line

□ Compressors - Other

■ Fuel Gas Meters

Roads (Digitized)

— Paved

— Dirt

— Proposed

— Two Track

— Private

N

Topographic Map C  
T8S-R18E-31



410 87th Street Suite 300  
Denver, Colorado 80231  
Phone: (303) 414 4102

Gas Pipeline Map

UINTA BASIN, UTAH

Duchesne & Uintah Counties, Utah

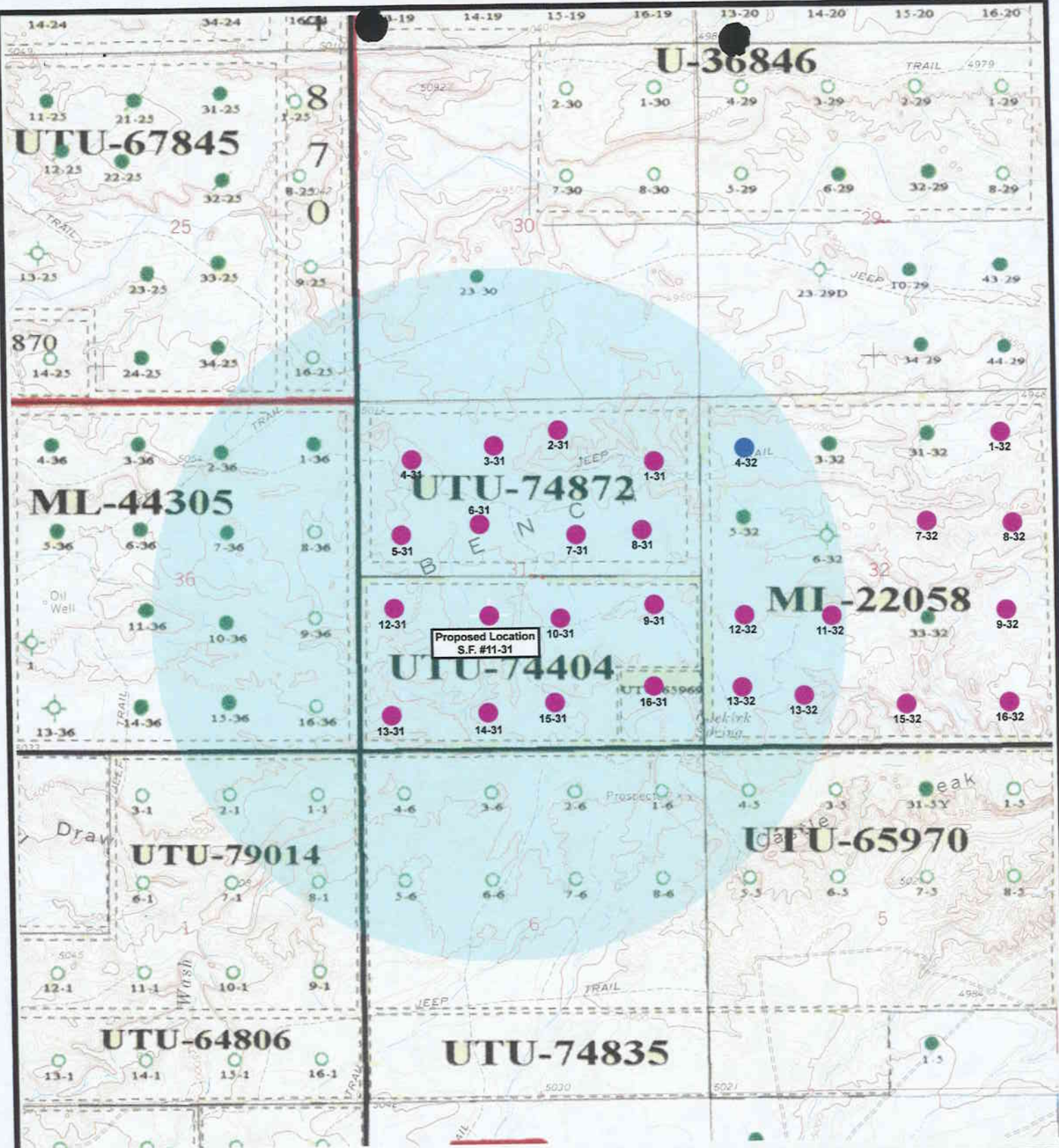
Jan. 2002

January 24, 2002









**Sundance Federal #11-31  
SEC. 31, T8S. R18E, S.L.B.&M.**

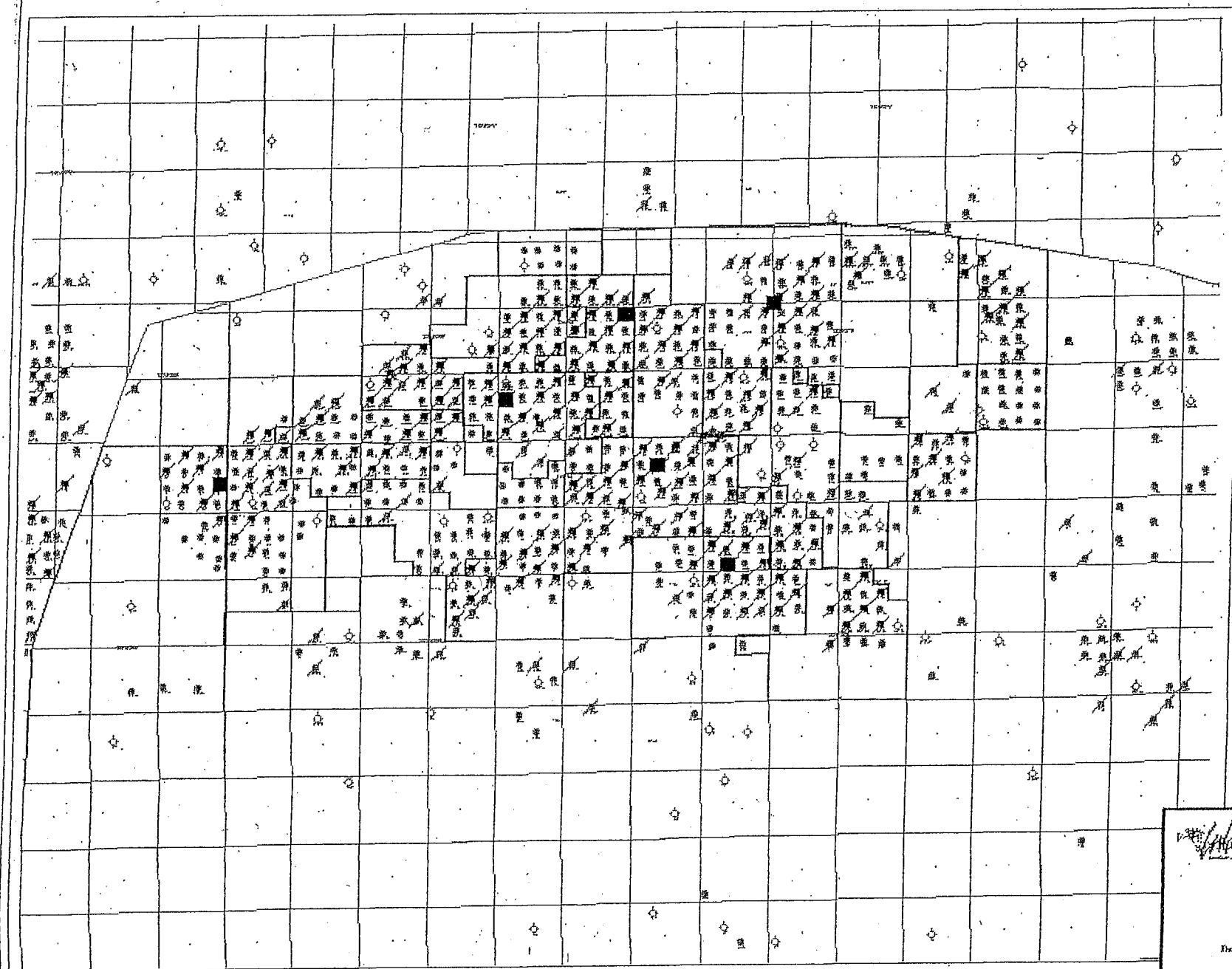


**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
38 West 100 North Vernal, Utah 84078

SCALE: 1" = 2000'  
DRAWN BY: D.J.  
DATE: 01-02-2002

- Legend**
- Existing Wells
  - Proposed Locations
  - One Mile Radius

**Exhibit  
"B"**



- Hackberry Shale
- Oil
- Dry
- Shoth
- Urte



Exhibit "A"

*Handwritten signature*

110 17th St., Room 700  
Denver, Colorado 80202  
Phone: (303) 533-1125

Utah Basin

UTAH BASIN, UTAH

Bartholomew & Clark Consultants, Inc.

Scale 1:10,000

U. S. Census

RAM TYPE B.O.P.

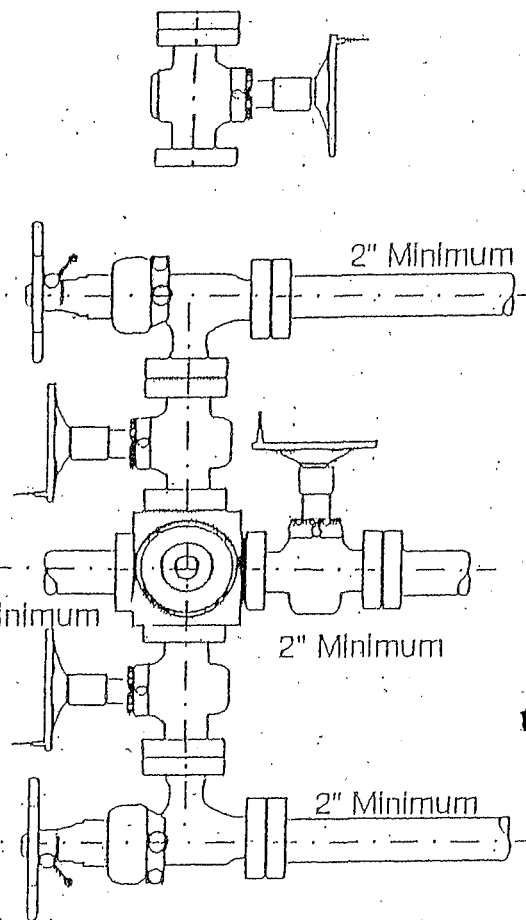
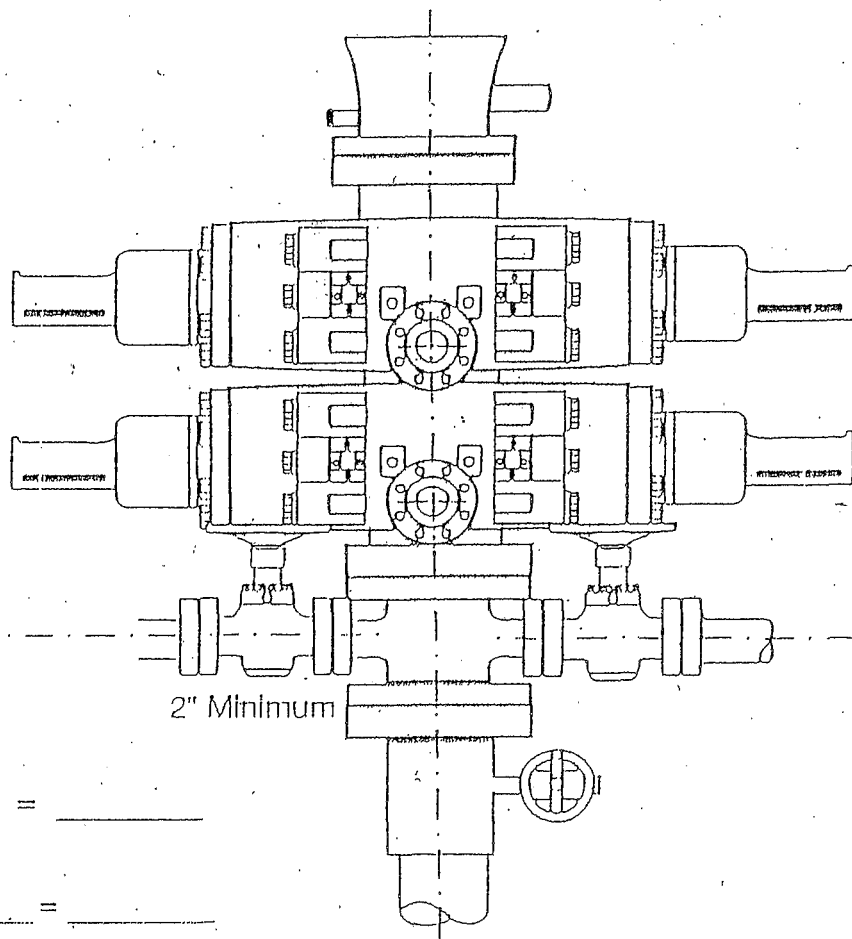
Make:

Size:

Model:

## 2-M SYSTEM

EXHIBIT "C"



GAL TO CLOSE

Annular BOP = \_\_\_\_\_

Ramtype BOP

\_\_\_\_\_ Rams x \_\_\_\_\_ = \_\_\_\_\_

= \_\_\_\_\_ Gal.

\_\_\_\_\_ x 2 = \_\_\_\_\_ Total Gal.

Rounding off to the next higher  
Increment of 10 gal. would require

\_\_\_\_\_ Gal. (total fluid & nitro volume)

**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 02/04/2002

API NO. ASSIGNED: 43-047-34501

WELL NAME: SUNDANCE FED 11-31-8-18

OPERATOR: INLAND PRODUCTION ( N5160 )

CONTACT: MANDIE CROZIER

PHONE NUMBER: 435-646-3721

**PROPOSED LOCATION:**

NESW 31 080S 180E

SURFACE: 2007 FSL 1996 FWL

BOTTOM: 2007 FSL 1996 FWL

UINTAH

8 MILE FLAT NORTH ( 590 )

INSPECT LOCATN BY: / /

**Tech Review**

**Initials**

**Date**

Engineering

Geology

Surface

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-74404

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: GRRV

**RECEIVED AND/OR REVIEWED:**

☒ Plat  
☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. 4488944 )

N Potash (Y/N)

N Oil Shale 190-5 (B) or 190-3 or 190-13

☒ Water Permit  
(No. MUNICIPAL )

H RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )

N/A Fee Surf Agreement (Y/N)

**LOCATION AND SITING:**

\_\_\_ R649-2-3. Unit \_\_\_\_\_

☒ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells

\_\_\_ R649-3-3. Exception

\_\_\_ Drilling Unit

Board Cause No: \_\_\_\_\_

Eff Date: \_\_\_\_\_

Siting: \_\_\_\_\_

\_\_\_ R649-3-11. Directional Drill

COMMENTS: mon. Butte Field Sol, separate file.

STIPULATIONS: 1-Fed. Approval  
2-Spacing Stip.





COUNTY: UINTAH



003



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Kathleen Clarke  
Executive Director

Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

801-538-5340

801-359-3940 (Fax)

801-538-7223 (TDD)

February 14, 2002

Inland Production Company  
Route 3 Box 3630  
Myton UT 84052

Re: Sundance Federal 11-31-8-18 Well, 2007' FSL, 1996' FWL, NE SW, Sec. 31, T. 8 South,  
R. 18 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-34501.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. R. Baza', written over a horizontal line.

John R. Baza  
Associate Director

er

Enclosures

cc: Uintah County Assessor  
Bureau of Land Management, Vernal District Office

Operator: Inland Production Company  
Well Name & Number Sundance Federal 11-31-8-18  
API Number: 43-047-34501  
Lease: UTU-74404

Location: NE SW Sec. 31 T. 8 South R. 18 East

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

005

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

INLAND PRODUCTION COMPANY

3. Address and Telephone No.

Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

2007 FSL 1996 FWL NE/SW Section 31, T8S R18E

FORM APPROVED

Budget Bureau No. 1004-0135

Expires: March 31, 1993

5. Lease Designation and Serial No.

UTU-74404

6. If Indian, Allottee or Tribe Name

NA

7. If Unit or CA, Agreement Designation

NA

8. Well Name and No.

SUNDANCE FED 11-31-8-18

9. API Well No.

43-047-34501

10. Field and Pool, or Exploratory Area

EIGHT MILE FLAT NORTH

11. County or Parish, State

UINTAH COUNTY, UTAH

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other **Permit Extension**

☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Inland Production Company requests to extend the permit to drill this well for one year.

COPY SENT TO OPERATOR

Date: 02-14-03

Initials: CHD

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 02-13-03

By: [Signature]

RECEIVED

FEB 04 2003

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed

Mandie Crozier

Title

Permit Clerk

Date

2/3/03

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



PRODUCTION COMPANY

A Subsidiary of Inland Resources Inc.

June 13, 2003

State of Utah  
Division of Oil, Gas & Mining  
Attn: Diana Mason  
1594 West North Temple - Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Amended Applications for Permit to Drill Wells No: 1-31-8-18, 7-31-8-18,  
8-31-8-18, 10-31-8-18, 11-31-8-18, and 14-31-8-18.

Dear Diana:

Enclosed find the amended Topographic Map "B" and Topographic Map "C" on the above mentioned locations. Since submission there have been some topographic changes on the proposed access roads as well as the proposed gas and water lines. Please replace the maps originally submitted with the revised maps that I have enclosed. If you have any questions, feel free to give either Brad or myself a call.

Sincerely,

Mandie Crozier  
Regulatory Specialist

enclosures

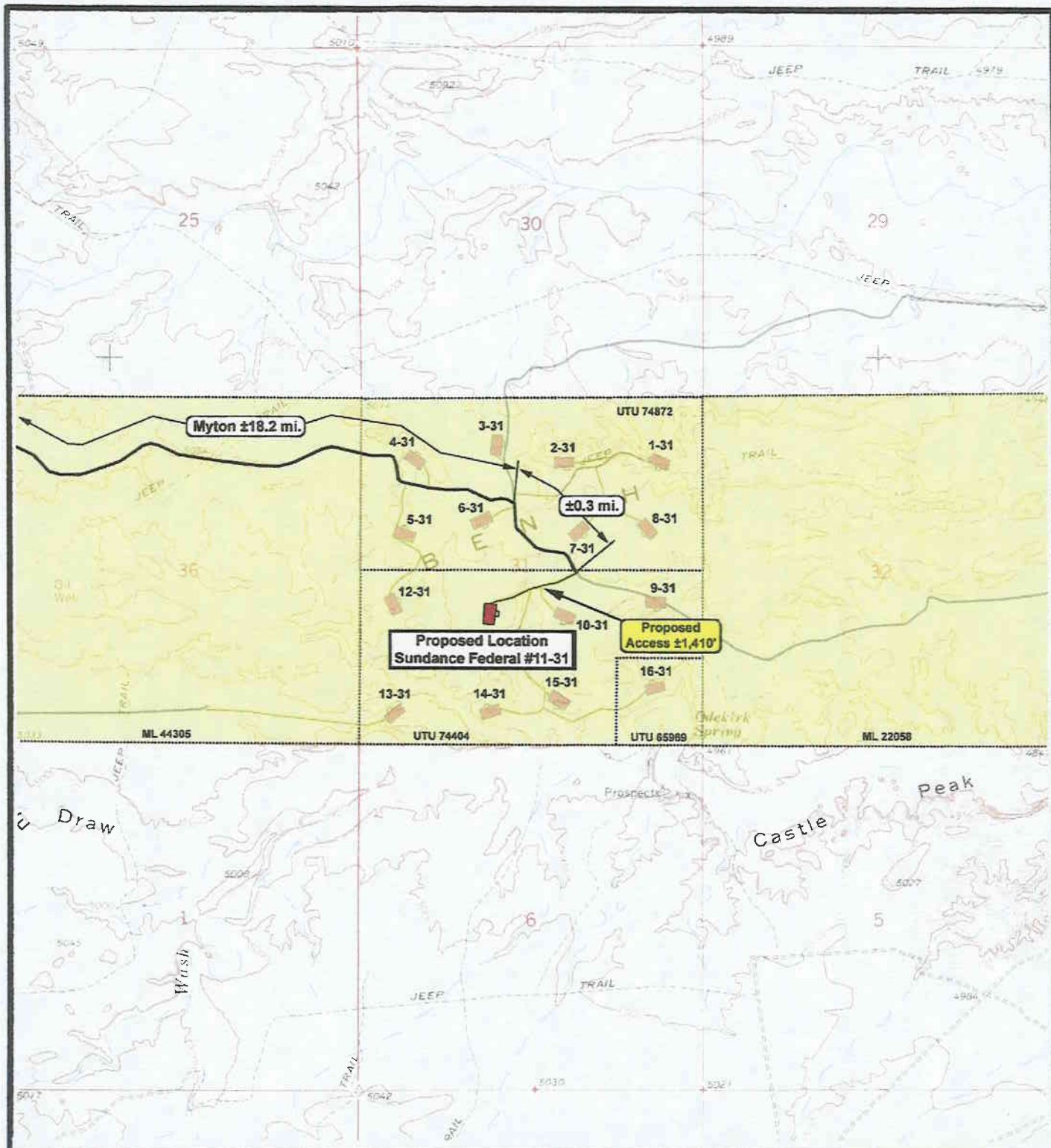
RECEIVED

JUN 16 2003

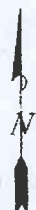
DIV. OF OIL, GAS & MINING

Inland Production Company Field Office • Route 3, Box 3630 • Myton, UT 84052 • 435-646-3721 • FAX 435-646-3031

Corporate Office • 410 Seventeenth Street, Suite 700 • Denver, CO 80202 • 303-893-0102 • FAX 303-893-0103



**Sundance Federal #11-31  
SEC. 31, T8S, R18E, S.L.B.&M.**



**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
180 North Vernal Ave. Vernal, Utah 84078

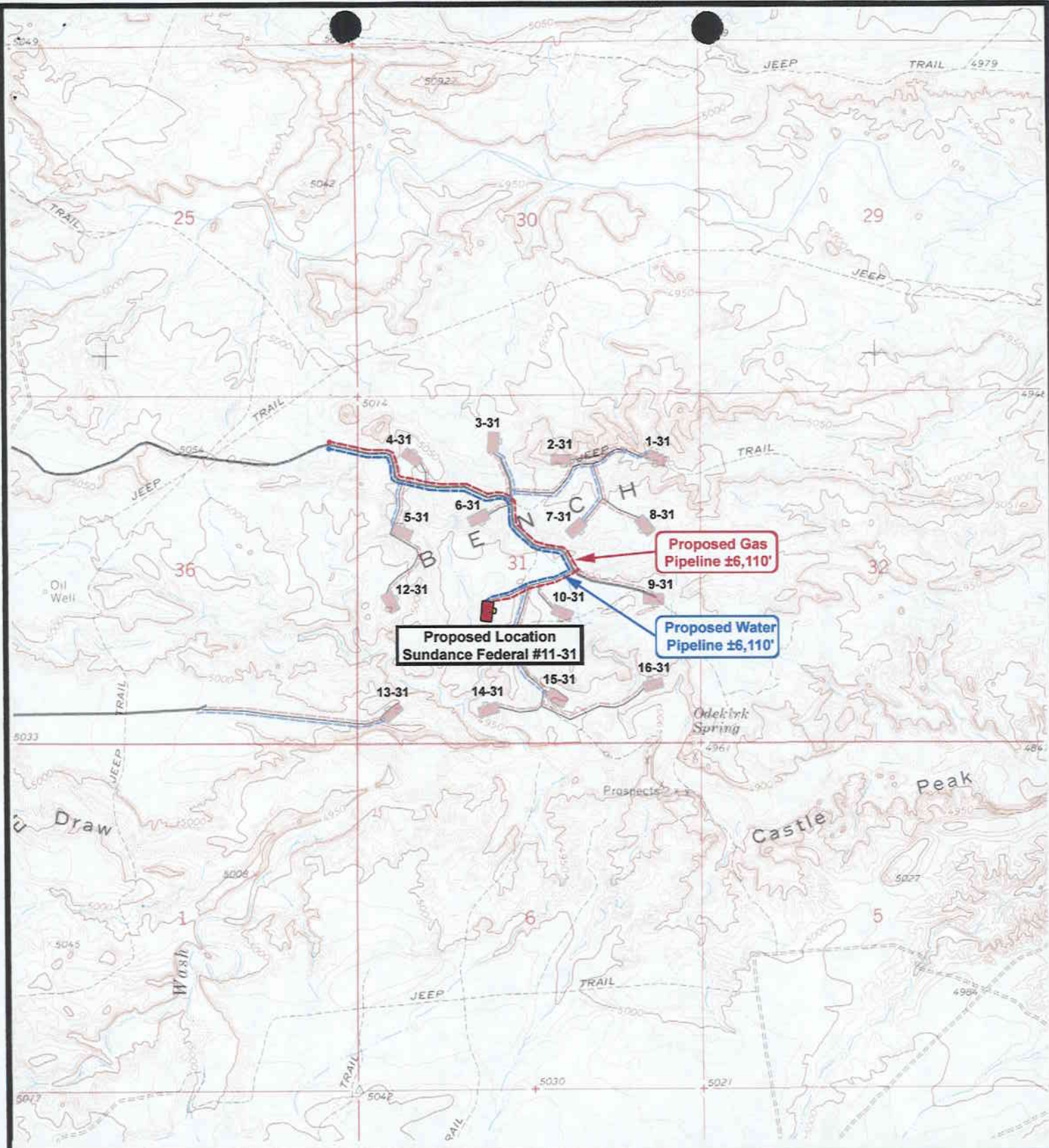
SCALE: 1" = 2,000'  
DRAWN BY: R.A.B.  
DATE: 05-28-2003

**Legend**  
Existing Road  
Proposed Access

TOPOGRAPHIC MAP

**"B"**





**Sundance Federal #11-31  
SEC. 31, T8S, R18E, S.L.B.&M.**



**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
DRAWN BY: R.A.B.  
DATE: 05-28-2003

**Legend**

- Roads
- - - Proposed Gas Line
- - - Proposed Water Line

TOPOGRAPHIC MAP

**"C"**

006

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>				5. LEASE DESIGNATION AND SERIAL NO. UTU-74404	
1b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	
2. NAME OF OPERATOR Inland Production Company				7. UNIT AGREEMENT NAME N/A	
3. ADDRESS OF OPERATOR Route #3 Box 3630, Myton, UT 84052 Phone: (435) 646-3721				8. FARM OR LEASE NAME WELL NO. 11-31-8-18	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) At Surface NE/SW 2007' FSL 1996' FWL At proposed Prod. Zone				9. API WELL NO.	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Approximately 20.8 miles southeast of Myton, Utah				10. FIELD AND POOL OR WILDCAT Monument Butte	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to Approx. 633' f/lse line		16. NO. OF ACRES IN LEASE 277.52		17. NO. OF ACRES ASSIGNED TO THIS WELL 40	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE, FT. Approx. 1193'		19. PROPOSED DEPTH 6500'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 4982.5' GR				22. APPROX. DATE WORK WILL START* 1st Quarter 2002	
23. PROPOSED CASING AND CEMENTING PROGRAM					
SIZE OF HOLE		SIZE OF CASING		WEIGHT/FOOT	
SETTING DEPTH		QUANTITY OF CEMENT			
Refer to Monument Butte Field SOP's Drilling Program/Casing Design					

Inland Production Company proposes to drill this well in accordance with the attached exhibits.

The Conditions of Approval are also attached.

RECEIVED RECEIVED

SEP 08 2003

FEB 04 2002

DIV. OF OIL, GAS &amp; MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM : If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone.  
If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.24. SIGNED Marcia Crozier TITLE Permit Clerk DATE 2/1/02  
(This space for Federal or State office use)

## NOTICE OF APPROVAL

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY Thomas S. Cleary TITLE Assistant Field Manager DATE 09/02/2003  
Mineral Resources

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

CONDITIONS OF APPROVAL ATTACHED



CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Inland Production Company

Well Name & Number: Monument Butte 11-31-8-18

API Number: 43-047-34501

Lease Number: U -74404

Location: NESW Sec. 31 T. 08S R. 18E

Agreement: N/A

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

**CONDITIONS OF APPROVAL FOR NOTICE TO DRILL**

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

A. DRILLING PROGRAM

1. Casing Program and Auxiliary Equipment

As a minimum, the usable water resources and other resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the base of the usable water zone, identified at  $\pm$  331 ft. or by setting the surface casing to 350 ft. and having a cement top for the production casing at least 200 ft. above the top of the Green River Formation, identified at  $\pm$  1,774 ft.

**CONDITIONS OF APPROVAL  
FOR THE SURFACE USE PROGRAM OF THE  
APPLICATION FOR PERMIT TO DRILL**

In order to mitigate long-term impacts to nesting Golden Eagles a field survey will be conducted prior to any surface disturbance activities to determine if nests are present. The survey will be conducted prior to construction or surface disturbing activities by a qualified wildlife biologist acceptable to the BLM. If active nests or nests which have been active during the year are found within ½ mile of the well location, no construction or drilling will be allowed. If inactive nests (nests which have been inactive for two or more years) are found within ½ mile, no construction or drilling would be allowed during the nesting season of Feb. 1 to July 15.

To protect the shallow water table in this area, the reserve pit shall be lined with at least a 12 mil nylon reinforced plastic liner. If rocky conditions are encountered in the pit, the liner shall be bedded with either certified straw or felt prior to installing the liner.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

008

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

5. Lease Designation and Serial No.

**UTU-74404**

6. If Indian, Allottee or Tribe Name

**NA**

7. If Unit or CA, Agreement Designation

**N/A**

8. Well Name and No.

**11-31-8-18**

9. API Well No.

**43-047-34501**

10. Field and Pool, or Exploratory Area

**8 MILE FLAT NORTH**

11. County or Parish, State

**UINTAH COUNTY, UT**

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

**INLAND PRODUCTION COMPANY**

3. Address and Telephone No.

**Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721**

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

**2007 FSL 1996 FWL NE/SW Section 31, T8S R18E**

12. **CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

**TYPE OF SUBMISSION**

☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

**TYPE OF ACTION**

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other Change of Name

☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Effective September 25, 2003 Inland Production Company is changing the name of the 11-31-8-18 to the **Federal 11-31-8-18**.

14. I hereby certify that the foregoing is true and correct

Signed

*Mandie Crozier*  
Mandie Crozier

Title

Regulatory Specialist

Date

9/25/2003

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM

RECEIVED

SEP 26 2003

U.S. DEPT. OF OIL, GAS & MINING

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**INLAND DIVISION OF OIL, GAS AND MINING****SPUDDING INFORMATION**Name of Company: INLAND PRODUCTION COMPANYWell Name: FEDERAL 11-31-8-18Api No: 43-047-34501 Lease Type: FEDERALSection 31 Township 08S Range 18E County UINTAHDrilling Contractor LEON ROSS RATHOLE RIG # 15**SPUDDED:**Date 10/09/03Time 7:00 AMHow DRY**Drilling will commence:** \_\_\_\_\_Reported by PAT WISENERTelephone # 1-435-823-7468Date 10/09/2003 Signed CHD

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

010

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

**INLAND PRODUCTION COMPANY**

3. Address and Telephone No.

**Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721**

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

**2007 FSL 1996 FWL NE/SW Section 31, T8S R18E**

5. Lease Designation and Serial No.

**UTU-74404**

6. If Indian, Allottee or Tribe Name

**NA**

7. If Unit or CA, Agreement Designation

**N/A**

8. Well Name and No.

**FEDERAL 11-31-8-18**

9. API Well No.

**43-047-34501**

10. Field and Pool, or Exploratory Area

**8 MILE FLAT NORTH**

11. County or Parish, State

**UINTAH COUNTY, UT**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other **Spud Notice**

☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

On 10-09-03 MIRU Ross # 15. Spud well @ 7:00 am. Drill 307' of 12 1/4" hole with air mist. TIH w/ 7 Jt's 85/8" J-55 24# csgn. Set @ 312.79'/KB. On 10-10-03. Cement with 150 sks of Class "G" w/ 2% CaCL2 + 1/4# sk Cello-Flake Mixed @ 15.8 ppg > 1.17 cf/sk yeild. 4 bbls cement returned to surface. WOC.

**RECEIVED**

**OCT 15 2003**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct

Signed

**Pat Wisener**

Title

**Drilling Foreman**

Date:

**10/13/2003**

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

# INLAND PRODUCTION COMPANY - CASING & CEMENT REPORT

8 5/8 CASING SET AT 312.79

LAST CASING 8 5/8" SET AT 312'  
 DATUM 12' KB  
 DATUM TO CUT OFF CASING \_\_\_\_\_  
 DATUM TO BRADENHEAD FLANGE \_\_\_\_\_  
 TD DRILLER 307 LOGGER \_\_\_\_\_  
 HOLE SIZE 12 1/4

OPERATOR Inland Production Company  
 WELL Federal 11-31-8-18  
 FIELD/PROSPECT Monument Butte  
 CONTRACTOR & RIG # Ross # 15

## LOG OF CASING STRING:

PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		39.02'sh jt' shjt					
		WHI - 92 csg head			8rd	A	0.95
7	8 5/8"	Maverick ST&C csg	24#	J-55	8rd	A	300.94
		<b>GUIDE</b> shoe			8rd	A	0.9
CASING INVENTORY BAL.		FEET	JTS	TOTAL LENGTH OF STRING			302.79
TOTAL LENGTH OF STRING		302.79	7	LESS CUT OFF PIECE			2
LESS NON CSG. ITEMS		1.85		PLUS DATUM TO T/CUT OFF CSG			12
PLUS FULL JTS. LEFT OUT		0		CASING SET DEPTH			<b>312.79</b>

TOTAL	300.94	7	} COMPARE	
TOTAL CSG. DEL. (W/O THRDS)	300.94	7		
TIMING	1ST STAGE			
BEGIN RUN CSG.	SPUD	10/9/2003	GOOD CIRC THRU JOB	<u>yes</u>
CSG. IN HOLE		7:00am	Bbls CMT CIRC TO SURFACE	<u>4 bbls</u>
BEGIN CIRC			RECIPROCATED PIPE FOR	<u>      </u> THRU <u>      </u> FT STROKE
BEGIN PUMP CMT			DID BACK PRES. VALVE HOLD ?	<u>N/A</u>
BEGIN DSPL. CMT			BUMPED PLUG TO	<u>490</u> PSI
PLUG DOWN	Cemented	10/10/2003		

CEMENT USED		CEMENT COMPANY- <b>B. J.</b>					
STAGE	# SX	CEMENT TYPE & ADDITIVES					
1	150	Class "G" w/ 2% CaCL2 + 1/4#/sk Cello-Flake mixed @ 15.8 ppg 1.17 cf/sk yield					

CENTRALIZER & SCRATCHER PLACEMENT	SHOW MAKE & SPACING
Centralizers - Middle first, top second & third for 3	
RECEIVED	

**RECEIVED**

COMPANY REPRESENTATIVE Pat Wisener **OCT 15 2003** DATE 10/11/2003

DIV. OF OIL, GAS & MINING

011

RECEIVED

OCT 16 2003

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
ENTITY ACTION FORM - FORM 6

DIV. OF OIL, GAS &amp; MINING

OPERATOR: **INLAND PRODUCTION COMPANY**  
ADDRESS: **RT. 3 BOX 3630**  
**MYTON, UT 84052**OPERATOR ACCT. NO. **N5160**

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	13923	43-013-32297	Ashley #6-11-9-15	SE/NW	11	9S	15E	Duchesne	October 8, 2003	10/16/03

WELL 1 COMMENTS: *GRUV*

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
●	99999	13924	43-047-34501	Federal #11-31-8-18	NE/SW	31	8S	18E	Utah	October 9, 2003	10/16/03

WELL 2 COMMENTS: *GRUV*

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	13925	43-047-34500	Federal #7-31-8-18	SW/NE	31	8S	18E	Utah	October 13, 2003	10/16/03

WELL 3 COMMENTS: *GRUV*

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	13926	43-013-32295	Ashley #4-11-9-15	NW/NW	11	9S	15E	Duchesne	October 13, 2003	10/16/03

WELL 4 COMMENTS: *GRUV*

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
●	99999	13927	43-047-34494	Federal #1-31-8-18	NE/NE	31	8S	18E	Utah	October 15, 2003	10/16/03

WELL 5 COMMENTS: *GRUV*

ACTION CODES (See instructions on back of form)

- A - Establish new entry for new well (single well only)
- B - Add new well to existing entity (group of well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected

*Kebbie S. Jones*  
Signature  
Production Clerk  
Date

Kebbie S. Jones

October 16, 2003  
Date

PAGE 02

INLAND

4356463031

10/16/2003 15:11

3889

2

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

007

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

**INLAND PRODUCTION COMPANY**

3. Address and Telephone No.

**Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721**

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

**2007 FSL 1996 FWL NE/SW Section 31, T8S R18E**

5. Lease Designation and Serial No.

**UTU-74404**

6. If Indian, Allottee or Tribe Name

**NA**

7. If Unit or CA, Agreement Designation

**N/A**

8. Well Name and No.

**FEDERAL 11-31-8-18**

9. API Well No.

**43-047-34501**

10. Field and Pool, or Exploratory Area

**8 MILE FLAT NORTH**

11. County or Parish, State

**UINTAH COUNTY, UT**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other **Weekly Status Report**

☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

On 10-12-03. MIRU Union. Set equipment. Pressure test Bop's, Kelly, & TIW to 2,000 psi. Test 85/8" csgn to 1,500 psi. Vernal BLM office was notified of test. PU BHA and tag cement @ 260'. Drill out cement & shoe. Continue to drill a 77/8" hole with fresh water to a depth of 6179'. Lay down drill string, BHA. Open hole log from TD to surface. PU & MU guide shoe, 1 jt 51/2" J-55 15.5 # csgn. Float collar, & 143 Jt's 51/2" J-55 15.5# csgn. Set @ 6113' KB. Cement with 285 sks Prem Lite II w/ 3% KCL, 8 % Gel, 5#"s sk CSE, 3#"s sk Kolseal, .8% Sms, 1/4# sks Celloflake. Mixed @ 11.0 ppg, >3.42 yld. Followed by 495 sks 50/50 Poz w/ 3% KCL, 2% Gel, .05% Static free, 1/4# sk Celloflake. Mixed @ 14.4 ppg, > 1.24 yld. Lost returns last 10 BBLS of displacement, no cement to surface. Nipple down BOP's. set slips @ 70,000 #'s tension. Clean pit's & release rig @ 9:00am on 10-18-03.

14. I hereby certify that the foregoing is true and correct

Signed

*Floyd Mitchell*  
Floyd Mitchell

Title

**Drilling Foreman**

Date

**10-19-2003**

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED

OCT 21 2003

DIV. OF OIL, GAS & MIN.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

012

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

5. Lease Serial No.

UTU74404

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or

SUNDANCE AREA

8. Well Name and No.

FEDERAL 11-31-8-18

9. API Well No.

4304734501

10. Field and Pool, or Exploratory Area  
Monument Butte

11. County or Parish, State

Uintah, UT

SUBMIT IN TRIPLICATE - (Other instructions on reverse side)

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Inland Production Company

3a. Address Route 3 Box 3630

Myton, UT 84052

3b. Phone (include area code)

435.646.3721

4. Location of (Footage, Sec., T., R., M., or Survey Description)

2007 FSL 1996 FWL

NE/SW Section 31 T8S R18E

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production(Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Weekly Status Report _____
	<input type="checkbox"/> Convert to	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontal, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final

Status report for time period 10/29/03 - 11/12/03 Subject well had completion procedures initiated in the Green River formation on 10/29/03 without the use of a service rig over the well. A cement bond log was run and a total of eight Green River intervals were perforated and hydraulically fracture treated w/ 20/40 mesh sand. Perf intervals were #1 (5961-5970'), (5922-5929') (All 4 JSPF); #2 (5839-5843') (4 JSPF), (5796-5818') (2 JSPF); #3 (5613-5620'), (5594-5600'), (5577-5586'), (5560-5566'), (5535-5549'), (5512-5518'), (5478-5504') (All 2 JSPF); #4 (5414-5428'), (5389-5400'), (5377-5385'), (5346-5356'), (5301-5305') (All 2 JSPF); #5 (5182-5198'), (5146-5169'), (5130-5135'), (5118-5122') (All 2 JSPF); #6 (4890-4899') (4 JSPF); #7 (4428-4440') (4 JSPF); #8 (4322-4334') (4 JSPF). Composite flow-through frac plugs were used between stages. Fracs were flowed back through chokes. A service rig was moved on well on 11/07/03. Bridge plugs were drilled out. Well was cleaned out to PBTD @ 6096'. Zones were swab tested for sand cleanup. A BHA & production tbg string were run in and anchored in well. End of tubing string @ 5995.47'. A new 1 3/4" bore rod pump was run in well on sucker rods. Well was placed on production via rod pump on 11/12/03.

I hereby certify that the foregoing is true and correct (Printed/ Typed)  
Martha Hall

Signature

Title

Office Manager

Date

11/13/2003

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or which would entitle the applicant to conduct operations thereon.

certify that the applicant holds legal or equitable title to those rights in the subject lease

Title

Date

Office

RECEIVED

NOV 17 2003

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on reverse)

DIV. OF OIL, GAS & MINING



December 16, 2003

State of Utah, Division of Oil, Gas and Mining  
Attn: Ms. Carol Daniels  
P.O. Box 145801  
Salt Lake City, Utah 84144-5801

Attn: Ms. Carol Daniels

Ashley 5-11-9-15 (43-013-32296)  
Duchesne County, Utah

Federal 11-31-8-18 (43-047-34501)  
Uintah County, Utah

Dear Ms. Carol Daniels

Enclosed is a Well Completion or Recompletion Report and Log form (Form 3160-4). We are no longer sending Log copies since Dave Jull of Phoenix Surveys is already doing so.

If you should have any questions, please contact me at (303) 382-4449.

Sincerely,

Brian Harris  
Engineering Tech

Enclosures

cc: Bureau of Land Management  
Vernal District Office, Division of Minerals  
Attn: Edwin I. Forsman  
170 South 500 East  
Vernal, Utah 84078

Well File – Denver  
Well File – Roosevelt  
Patsy Barreau/Denver  
Bob Jewett/Denver

RECEIVED

DEC 19 2003

DIV. OF OIL, GAS & MINING

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

013

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

## 1a. TYPE OF WORK

OIL WELL ☒GAS WELL ☐DRY ☐

Other \_\_\_\_\_

## 1b. TYPE OF WELL

NEW WELL ☒WORK OVER ☐DEEPEN ☐PLUG BACK ☐DIFF RESVR. ☐

Other \_\_\_\_\_

## 2. NAME OF OPERATOR

INLAND RESOURCES INC.

## 3. ADDRESS AND TELEPHONE NO.

410 17th St. Suite 700 Denver, CO 80202

## 4. LOCATION OF WELL (Report locations clearly and in accordance with any State requirements.)\*

At Surface

2007' FSL &amp; 1996' FWL (NESW) Sec. 31, Twp 8S, Rng 18E

At top prod. Interval reported below

At total depth

14. API NO.

43-047-34501

DATE ISSUED

9/2/2003

15. DATE SPUDDED  
10/9/0316. DATE T.D. REACHED  
10/17/0317. DATE COMPL. (Ready to prod.)  
11/12/0318. ELEVATIONS (DF, RKB, RT, GR, ETC.)\*  
4982' GL

4994' KB

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD &amp; TVD

6179'

21. PLUG BACK T.D., MD &amp; TVD

6096'

22. IF MULTIPLE COMPL.,  
HOW MANY\*23. INTERVALS  
DRILLED BY  
----->

ROTARY TOOLS

X

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)\*

Green River 4322'-5970'

25. WAS DIRECTIONAL  
SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

Dual Induction Guard, SP, Compensated Density, Compensated Neutron, GR, Caliper, Cement Bond Log

27. WAS WELL CORED

No

## 23. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8-5/8" - J-55	24#	312'	12-1/4"	To surface with 150 sx Class "G" cmt	
5-1/2" - J-55	15.5#	6113'	7-7/8"	289 sx Premlite II and 495 sx 50/50 Poz	

## 29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	EOT @ 5995'	TA @ 5858'

## 31. PERFORATION RECORD (Interval, size and number)

INTERVAL	SIZE	SPE/NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
(CP3,4) 5922-29', 5961-70'	.038"	4/62	5922'-5970'	Frac w/ 45,827# 20/40 sand in 439 bbls fluid.
(CP2) 5796-5818', 5839-43'	.038"	4/60	5796'-5843'	Frac w/ 69,844# 20/40 sand in 574 bbls fluid.
LoLODC) 5478-5504', 5512-18', 5535-49',				
5560-66', 5577-86', 5594-5600', 5613-02'	.038"	2/148	5478'-5620'	Frac w/ 251,133# 20/40 sand in 1650 bbls fluid.
A3,UpLODC) 5301-05, 5346-56', 5377-85'				
5389-5400', 5414-28'	.038"	2/94	5301'-5428'	Frac w/ 149,764# 20/40 sand in 1031 bbls fluid.
(B1,2,A,5) 5118-22', 5130-35',				
5146-69', 5182-98'	.038"	2/96	5118'-5198'	Frac w/ 119,524# 20/40 sand in 837 bbls fluid.
(D2) 4890'-4899'	.038"	4/36	4890'-4899'	Frac w/ 34,828# 20/40 sand in 341 bbls fluid.
(GB6) 4428'-4440'	.038"	4/48	4428'-4440'	Frac w/ 39,842# 20/40 sand in 362 bbls fluid.
(GB4) 4322'-4334'	.038"	4/48	4322'-4334'	Frac w/ 35,873# 20/40 sand in 362 bbls fluid.

## 33.\* PRODUCTION

DATE FIRST PRODUCTION 11/12/03		PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump) 2-1/2" x 1-1/2" x 15' RHAC Pump					WELL STATUS (Producing or shut-in) PRODUCING	
DATE OF TEST 10 day ave		HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD ----->	OIL--BBL. 114	GAS--MCF. 57	WATER--BBL. 21	GAS-OIL RATIO 500
FLOW. TUBING PRESS.		CASING PRESSURE	CALCULATED 24-HOUR RATE ----->	OIL-BBL.	GAS--MCF.	WATER--BBL.		OIL GRAVITY-API (CORR.)

## 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold &amp; Used for Fuel

TEST WITNESSED BY

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

Brian Harris

TITLE

Engineering Technician

DATE

12/16/03

BDH

\*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);					38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP		
					MEAS. DEPTH	TRUE VERT. DEPTH	
			Well Name Federal 11-31-8-18	Garden Gulch Mkr	3904'		
				Garden Gulch 1	4075'		
				Garden Gulch 2	4192'		
				Point 3 Mkr	4452'		
				X Mkr	4672'		
				Y-Mkr	4709'		
				Douglas Creek Mkr	4835'		
				BiCarbonate Mkr	5057'		
				B Limestone Mkr			
				Castle Peak	5700'		
				Basal Carbonate	6101'		
				Total Depth (LOGGERS)	6179'		

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

**INLAND PRODUCTION COMPANY**

3. Address and Telephone No.

**Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721**

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

**2007 FSL 1996 FWL NE/SW Section 31, T8S R18E**

5. Lease Designation and Serial No.

**UTU-74404**

6. If Indian, Allottee or Tribe Name

**NA**

7. If Unit or CA, Agreement Designation

**N/A**

8. Well Name and No.

**FEDERAL 11-31-8-18**

9. API Well No.

**43-047-34501**

10. Field and Pool, or Exploratory Area

**8 MILE FLAT NORTH**

11. County or Parish, State

**UINTAH COUNTY, UT**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☐ Other  
☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☒ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Formation water is produced to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Inland's secondary recovery project.

Water not meeting quality criteria, is disposed at Inland's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

**RECEIVED**

**FEB 13 2004**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct

Signed

*Mandie Crozier*  
Mandie Crozier

Title

Regulatory Specialist

Date

2/11/2004

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM



## Office of the Secretary of State

The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

Newfield Production Company  
Filing Number: 41530400

Articles of Amendment

September 02, 2004

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 10, 2004.



A handwritten signature in black ink, appearing to read "G. Connor".

Secretary of State

ARTICLES OF AMENDMENT  
TO THE  
ARTICLES OF INCORPORATION  
OF  
INLAND PRODUCTION COMPANY

FILED  
In the Office of the  
Secretary of State of Texas

SEP 02 2004

Corporations Section

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act (the "TBCA"), the undersigned corporation adopts the following articles of amendment to the articles of incorporation:

ARTICLE 1 – Name

The name of the corporation is Inland Production Company.

ARTICLE 2 – Amended Name

The following amendment to the Articles of Incorporation was approved by the Board of Directors and adopted by the shareholders of the corporation on August 27, 2004.

The amendment alters or changes Article One of the Articles of Incorporation to change the name of the corporation so that, as amended, Article One shall read in its entirety as follows:

"ARTICLE ONE – The name of the corporation is Newfield Production Company."

ARTICLE 3 – Effective Date of Filing

This document will become effective upon filing.

The holder of all of the shares outstanding and entitled to vote on said amendment has signed a consent in writing pursuant to Article 9.10 of the TBCA, adopting said amendment, and any written notice required has been given.

IN WITNESS WHEREOF, the undersigned corporation has executed these Articles of Amendment as of the 1<sup>st</sup> day of September, 2004.

INLAND RESOURCES INC.

By: Susan G. Riggs  
Susan G. Riggs, Treasurer



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155  
<http://www.blm.gov>



IN REPLY REFER TO:  
3106  
(UT-924)

September 16, 2004

### Memorandum

To: Vernal Field Office

From: Acting Chief, Branch of Fluid Minerals

Subject: Merger Approval

Attached is an approved copy of the name change recognized by the Utah State Office. We have updated our records to reflect the merger from Inland Production Company into Newfield Production Company on September 2, 2004.

Michael Coulthard  
Acting Chief, Branch of  
Fluid Minerals

### Enclosure

1. State of Texas Certificate of Registration

cc: MMS, Reference Data Branch, James Sykes, PO Box 25165, Denver CO 80225  
State of Utah, DOGM, Attn: Earlene Russell, PO Box 145801, SLC UT 84114  
Teresa Thompson  
Joe Incardine  
Connie Seare



UTSL-	15855	61052	73088	76561	
071572A	16535	62848	73089	76787	
065914	16539	63073B	73520A	76808	
	16544	63073D	74108	76813	
	17036	63073E	74805	76954	63073X
	17424	63073O	74806	76956	63098A
	18048	64917	74807	77233	68528A
UTU-	18399	64379	74808	77234	72086A
	19267	64380	74389	77235	72613A
02458	26026A	64381	74390	77337	73520X
03563	30096	64805	74391	77338	74477X
03563A	30103	64806	74392	77339	75023X
04493	31260	64917	74393	77357	76189X
05843	33992	65207	74398	77359	76331X
07978	34173	65210	74399	77365	76788X
09803	34346	65635	74400	77369	77098X
017439B	36442	65967	74404	77370	77107X
017985	36846	65969	74405	77546	77236X
017991	38411	65970	74406	77553	77376X
017992	38428	66184	74411	77554	78560X
018073	38429	66185	74805	78022	79485X
019222	38431	66191	74806	79013	79641X
020252	39713	67168	74826	79014	80207X
020252A	39714	67170	74827	79015	81307X
020254	40026	67208	74835	79016	
020255	40652	67549	74868	79017	
020309D	40894	67586	74869	79831	
022684A	41377	67845	74870	79832	
027345	44210	68105	74872	79833	
034217A	44426	68548	74970	79831	
035521	44430	68618	75036	79834	
035521A	45431	69060	75037	80450	
038797	47171	69061	75038	80915	
058149	49092	69744	75039	81000	
063597A	49430	70821	75075		
075174	49950	72103	75078		
096547	50376	72104	75089		
096550	50385	72105	75090		
	50376	72106	75234		
	50750	72107	75238		
10760	51081	72108	76239		
11385	52013	73086	76240		
13905	52018	73087	76241		
15392	58546	73807	76560		

## OPERATOR CHANGE WORKSHEET

014

Change of Operator (Well Sold)

Designation of Agent/Operator

## ROUTING

1. GLH

2. CDW

3. FILE

X Operator Name Change

Merger

The operator of the well(s) listed below has changed, effective:

9/1/2004

**FROM:** (Old Operator):

N5160-Inland Production Company

Route 3 Box 3630

Myton, UT 84052

Phone: 1-(435) 646-3721

**TO:** ( New Operator):

N2695-Newfield Production Company

Route 3 Box 3630

Myton, UT 84052

Phone: 1-(435) 646-3721

CA No.

Unit:

## WELL(S)

NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS	
FEDERAL 3-31-8-18	31	080S	180E	4304734496	13915	Federal	OW	P	K
FEDERAL 4-31-8-18	31	080S	180E	4304734497	13942	Federal	OW	DRL	K
FEDERAL 5-31-8-18	31	080S	180E	4304734498	13898	Federal	OW	P	K
FEDERAL 6-31-8-18	31	080S	180E	4304734499	13960	Federal	OW	P	K
FEDERAL 7-31-8-18	31	080S	180E	4304734500	13925	Federal	OW	P	K
FEDERAL 11-31-8-18	31	080S	180E	4304734501	13924	Federal	OW	P	K
FEDERAL 12-31-8-18	31	080S	180E	4304734502	13958	Federal	OW	P	K
FEDERAL 13-31-8-18	31	080S	180E	4304734503	14324	Federal	OW	P	K
FEDERAL 8-31-8-18	31	080S	180E	4304734504	13961	Federal	OW	P	K
FEDERAL 10-31-8-18	31	080S	180E	4304734930	13986	Federal	OW	P	K
FEDERAL 9-31-8-18	31	080S	180E	4304734931	13963	Federal	OW	P	K
FEDERAL 2-1-9-17	01	090S	170E	4304734938		Federal	OW	APD	K
FEDERAL 3-1-9-17	01	090S	170E	4304734939		Federal	OW	APD	K
FEDERAL 8-1-9-17	01	090S	170E	4304734940		Federal	OW	APD	K
FEDERAL 5-6-9-18	06	090S	180E	4304734932		Federal	OW	APD	K
FEDERAL 6-6-9-18	06	090S	180E	4304734933	14152	Federal	OW	P	K
FEDERAL 7-6-9-18	06	090S	180E	4304734934	14126	Federal	OW	P	K
FEDERAL 8-6-9-18	06	090S	180E	4304734935		Federal	OW	APD	K
FEDERAL 13-6-9-18	06	090S	180E	4304734936	14049	Federal	OW	P	K
FEDERAL 14-6-9-18	06	090S	180E	4304734937	14064	Federal	OW	P	K

## OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 9/15/20042. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 9/15/20043. The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 2/23/2005

4. Is the new operator registered in the State of Utah: YES Business Number: 755627-0143

5. If **NO**, the operator was contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE  
6b. Inspections of LA PA state/fee well sites complete on: waived

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM BIA

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: na/

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 2/23/2005

#### DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 2/28/2005  
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 2/28/2005  
3. Bond information entered in RBDMS on: 2/28/2005  
4. Fee/State wells attached to bond in RBDMS on: 2/28/2005  
5. Injection Projects to new operator in RBDMS on: 2/28/2005  
6. Receipt of Acceptance of Drilling Procedures for APD/New on: waived

#### FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UT 0056

#### INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 61BSBDH2912

#### FEE & STATE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 61BSBDH2919  
2. The **FORMER** operator has requested a release of liability from their bond on: n/a\*  
The Division sent response by letter on: n/a

#### LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

#### COMMENTS:

\*Bond rider changed operator name from Inland Production Company to Newfield Production Company - **received 2/23/05**



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155



IN REPLY REFER TO  
3180  
UT-922

June 30, 2005

Newfield Production Company  
Attn: Kelly L. Donohoue  
1401 Seventeenth Street, Suite 1000  
Denver, Colorado 80202

Gentlemen:

The Sundance (Green River) Unit Agreement, Uintah County, Utah, was approved June 30, 2005. This agreement has been designated No. UTU82472X, and is effective July 1, 2005. The unit area embraces 11,143.86 acres, more or less.

Pursuant to regulations issued and effective June 17, 1988, all operations within the Sundance (Green River) Unit will be covered by your nationwide (Utah) oil and gas bond No. 0056.

The following leases embrace lands included within the unit area:

UTU0075174	UTU39713	UTU65970*	UTU79013*
UTU16539*	UTU39714	UTU74404	UTU79014*
UTU16540	UTU44429	UTU74835	UTU80915
UTU17424*	UTU64806*	UTU74872*	UTU82205
UTU18043	UTU65969	UTU75234	

\* Indicates lease to be considered for segregation by the Bureau of Land Management pursuant to Section 18 (g) of the unit agreement and Public Law 86-705.

All lands and interests by State of Utah, Cause No. 228-08 are fully committed.

Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject leases which are committed hereto.

RECEIVED

JUL 0 / 2005

DIV. OF OIL, GAS & MINING

*Docket No  
2005-009*

We are of the opinion that the agreement is necessary and advisable in the public interest and for the purpose of more properly conserving natural resources. Certification-Determination, signed by the School and Institutional Trust Land Administration for the State of Utah, is attached to the enclosed agreement. We request that you furnish the State of Utah and all other interested principals with appropriate evidence of this approval.

Sincerely,

/s/ Terry Catlin

Terry Catlin  
Acting Chief, Branch of Fluid Minerals

Enclosure

bcc: Mary Higgins w/enclosure  
MMS - Data Management Division (Attn: James Sykes)  
Trust Lands Administration  
Division of Oil, Gas and Mining  
Field Manager - Vernal w/enclosure  
File - Sundance (Green River) Unit w/enclosure  
Agr. Sec. Chron  
Fluid Chron  
Central Files

UT922:TAThompson:tt:06/30/2005

Entity Form 6  
"C" Change from one existing entity to another existing entity

API	Well	Sec	Twsp	Rng	Entity	Entity Eff Date
4301316218	CASTLE DRAW 16-10-9-17	10	090S	170E	8120 to 14844	9/20/2005
4301330568	FEDERAL 8-10-9-17	10	090S	170E	8000 to 14844	9/20/2005
4301332502	FEDERAL 9-10-9-17	10	090S	170E	14325 to 14844	9/20/2005
4301331593	MON FED 11-11-9-17Y	11	090S	170E	11904 to 14844	9/20/2005
4301332486	FEDERAL 5-11-9-17	11	090S	170E	14285 to 14844	9/20/2005
4301332510	FEDERAL 13-11-9-17	11	090S	170E	14273 to 14844	9/20/2005
4301332544	FEDERAL 12-11-9-17	11	090S	170E	14613 to 14844	9/20/2005
4301332704	FEDERAL 12-14-9-17	14	090S	170E	14786 to 14844	9/20/2005
4301331023	FEDERAL 15-1-B	15	090S	170E	10201 to 14844	9/20/2005
4304734494	FEDERAL 1-31-8-18	31	080S	180E	13927 to 14844	9/20/2005
4304734495	FEDERAL 2-31-8-18	31	080S	180E	13959 to 14844	9/20/2005
4304734496	FEDERAL 3-31-8-18	31	080S	180E	13915 to 14844	9/20/2005
4304734497	FEDERAL 4-31-8-18	31	080S	180E	13942 to 14844	9/20/2005
4304734498	FEDERAL 5-31-8-18	31	080S	180E	13898 to 14844	9/20/2005
4304734499	FEDERAL 6-31-8-18	31	080S	180E	13960 to 14844	9/20/2005
4304734500	FEDERAL 7-31-8-18	31	080S	180E	13925 to 14844	9/20/2005
4304734501	FEDERAL 11-31-8-18	31	080S	180E	13924 to 14844	9/20/2005
4304734502	FEDERAL 12-31-8-18	31	080S	180E	13958 to 14844	9/20/2005
4304734503	FEDERAL 13-31-8-18	31	080S	180E	14324 to 14844	9/20/2005
4304734504	FEDERAL 8-31-8-18	31	080S	180E	13961 to 14844	9/20/2005
4304734930	FEDERAL 10-31-8-18	31	080S	180E	13986 to 14844	9/20/2005
4304734931	FEDERAL 9-31-8-18	31	080S	180E	13963 to 14844	9/20/2005
4304731116	NGC ST 33-32	32	080S	180E	6210 to 14844	9/20/2005
4304732500	STATE 31-32	32	080S	180E	11645 to 14844	9/20/2005
4304732685	SUNDANCE ST 5-32	32	080S	180E	11781 to 14844	9/20/2005
4304732740	SUNDANCE ST 1-32R-8-18	32	080S	180E	11886 to 14844	9/20/2005
4304732741	SUNDANCE ST 3-32	32	080S	180E	12059 to 14844	9/20/2005
4304732827	SUNDANCE ST 4-32	32	080S	180E	12106 to 14844	9/20/2005
4304734458	SUNDANCE 7-32-8-18	32	080S	180E	13987 to 14844	9/20/2005
4304734459	SUNDANCE 8-32-8-18	32	080S	180E	14047 to 14844	9/20/2005
4304734460	SUNDANCE 9-32-8-18	32	080S	180E	13988 to 14844	9/20/2005
4304734461	SUNDANCE 11-32-8-18	32	080S	180E	13962 to 14844	9/20/2005
4304734462	SUNDANCE 12-32-8-18	32	080S	180E	14031 to 14844	9/20/2005
4304734463	SUNDANCE 13-32-8-18	32	080S	180E	13964 to 14844	9/20/2005
4304734464	SUNDANCE 14-32-8-18	32	080S	180E	14046 to 14844	9/20/2005



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
999 18th STREET - SUITE 300  
DENVER, CO 80202-2466  
<http://www.epa.gov/region08>

NOV 20 2006

Ref: 8P-W-GW

RECEIVED

NOV 24 2006

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

DIV. OF OIL, GAS & MINING

David Gerbig  
Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

Re: Underground Injection Control Program  
Final Permit: Federal 11-31-8-18  
Uintah County, Utah  
EPA Permit No. UT21025-06978

43.047.34501

Dear Mr. Gerbig:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Federal 11-31-8-18 injection well. A Statement of Basis, which discusses development of the conditions and requirements of the Permit, also is included.

The Public Comment period ended on OCT 19 2006. There were no comments on the Draft Permit received during the Public Notice period, and therefore the Final Permit becomes effective on the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect on the date that this Permit becomes effective.

Please note that under the terms of the Final Permit, you are authorized only to construct the proposed injection well, and must fulfill the "Prior to Commencing Injection" requirements of the Permit, Part II Section C Subpart 1 and obtain written Authorization to Inject prior to commencing injection. It is your responsibility to be familiar with and to comply with all provisions of the Final Permit.

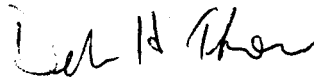
The Permit and the authorization to inject are issued for the operating life of the well unless terminated (Part III, Section B). The EPA will review this Permit at least every five (5) years to determine whether action under 40 CFR § 144.36(a) is warranted.



Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Emmett Schmitz of my staff at (303) 312-6174, or toll-free at (800) 227-8917, ext. 6174.

Sincerely,



*for* Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

enclosure: Final Permit  
Final Statement of Basis  
EPA Form No. 7520-07: Transfer Permit  
EPA Form No. 7520-10: Completion Report  
EPA Form No. 7520-11: Annual Injection Report  
EPA Form No. 7520-12: Well Rework Record  
EPA Form No. 7520-13: Plugging Record  
Guidance No. 35: Excessive Annulus Pressure  
Guidance No. 37: Part II (External) MIT  
Guidance No. 39: Part I (Internal) MIT

cc: Letter only:  
  
Maxine Natchees  
Acting Chairperson  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Chester Mills  
Superintendent  
U.S. Bureau of Indian Affairs  
Uintah & Ouray Indian Agency

Final Permit and Statement of Basis:

Shaun Chapoose  
Director  
Land Use Dept.  
Ute Indian Tribe





Lynn Becker  
Director  
Energy & Minerals Dept.  
Ute Indian Tribe

Fluid Minerals Engineering Dept.  
U.S. Bureau of Land Management  
Vernal, Utah

Gilbert Hunt  
Assistant Director  
State of Utah - Natural Resources

all enclosures:

Michael Guinn  
Vice President - Operations  
Newfield Production Company  
Myton, Utah





**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: November 2006

RECEIVED

NOV 24 2006

DIV. OF OIL, GAS & MINING

**Permit No. UT21025-06978**

**Class II Enhanced Oil Recovery Injection Well**

**Federal 11-31-8-18  
Uintah County, UT**

Issued To

**Newfield Production Company**

1401 Seventeenth Street

Suite 1000

Denver, CO 80202

## **Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE**

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

Federal 11-31-8-18  
2007' FSL & 1996' FWL, NESW S31, T8S, R18E  
Uintah County, UT

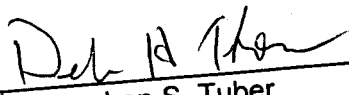
EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 124, 144, 146 and 147) are not discussed in this document. Under 40 CFR §144.35, issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other federal, state or local laws or regulations. EPA UIC permits may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §§144.39, 144.40 and 144.41, and are subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well or wells unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for this program is delegated to an Indian Tribe or a State. Upon the effective date of delegation, all reports, notifications, questions and other compliance actions shall be directed to the Indian tribe or State Program Director or designee.

Issue Date: NOV 24 2006

Effective Date NOV 24 2006

  
for Stephen S. Tuber  
Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## PART II. SPECIFIC PERMIT CONDITIONS

### Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### 1. Casing and Cement.

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### 2. Injection Tubing and Packer.

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### 3. Sampling and Monitoring Devices.

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. Demonstration of Mechanical Integrity (MI).**

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. Mechanical Integrity Test Methods and Criteria**

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. Notification Prior to Testing.**

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. Loss of Mechanical Integrity.**

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

**Section C. WELL OPERATION**  
**INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND**  
**SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

**1. Requirements Prior to Commencing Injection.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

**2. Injection Interval.**

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

**3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.



#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The Permittee shall retain records at the location designated in APPENDIX D.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

**1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

**2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

**3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

**4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

**5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

**6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## PART III. CONDITIONS APPLICABLE TO ALL PERMITS

### Section A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### Section B. CHANGES TO PERMIT CONDITIONS

#### 1. *Modification, Reissuance, or Termination.*

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### 2. *Conversions.*

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### 3. *Transfer of Permit.*

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

#### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

#### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

#### **Section E. GENERAL PERMIT REQUIREMENTS**

##### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.



**2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

**3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

**4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

**5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

**6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

**7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

**8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

**9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

#### **10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

#### **11. Reporting Requirements.**

- (a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.
- (d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### **1. Method of Providing Financial Responsibility.**

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### **2. Insolvency.**

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

See Schematic:

The Federal No. 11-31-8-18 was drilled to a total depth of 6179 (KB) feet in the Basal Carbonate Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 312 feet in a 12-1/4 inch hole using 150 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6113.27 feet (KB) in a 7-7/8 inch hole with 285 sacks of Premium Lite II and 495 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDWs.

The EPA calculates the top of cement as 1124 feet from the surface.

The schematic diagram shows the enhanced recovery injection perforations in the Garden Gulch and Douglas Creek Members of the Green River Formation. Additional perforations may be added at a later time between the depths of 3910 feet and the top of the Wasatch Formation (Estimated to be 6226 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be required to be set no higher than 100 feet above the top perforation.

# FEDERAL 11-31-8-18

Initial Production: BOPD,  
MCFD, BWPD

Spud Date: 10/9/03  
Put on Production: 11/12/03

GL: 4982' KB: 4994'

## SURFACE CASING

CSG SIZE: 8-5/8"

GRADE: 1-55

WEIGHT: 24#

LENGTH: 7 jts. (302.79')

DEPTH LANDED: 312.79' KB

HOLE SIZE: 12-1/4"

CEMENT DATA: 150 sxs Class "G" cmt, est 4 bbls cmt to surf.

*TOC/EPA*

## PRODUCTION CASING

CSG SIZE: 5-1/2"

GRADE: 1-55

WEIGHT: 15.5#

LENGTH: 143 jts. (6115.27')

DEPTH LANDED: 6113.27' KB

HOLE SIZE: 7-7/8"

CEMENT DATA: 285 sxs Prem. Lite II mixed & 495 sxs 50/50 POZ.

CEMENT TOP AT: 1720'

## TUBING

SIZE/GRADE/WT.: 2-7/8" / 1-55 / 6.5#

NO. OF JOINTS: 177 jts (5846.63')

TUBING ANCHOR: 5858.63' KB

NO. OF JOINTS: 2 jts (66.25')

SEATING NIPPLE: 2-7/8" (1.10')

SN LANDED AT: 5927.68' KB

NO. OF JOINTS: 2 jts (66.24')

TOTAL STRING LENGTH: EOT @ 5995.47' W/12' KB

## Proposed Injection Wellbore Diagram

## FRAC JOB

11/4/03 5922'-5970'

11/4/03 5796'-5843'

11/04/03 5478'-5620'

11/05/03 5301'-5428'

11/05/03 5118'-5198'

11/5/03 4890'-4899'

11/5/03 4428'-4440'

11/5/03 4322'-4334'

4322'-4334'

4428'-4440'

4890'-4899'

5118'-5122'

5130'-5135'

5146'-5169'

5182'-5198'

5301'-5305'

5346'-5356'

5377'-5385'

5389'-5400'

5414'-5428'

5478'-5504'

5512'-5518'

5535'-5549'

5560'-5566'

5577'-5586'

5594'-5600'

5613'-5620'

5796'-5818'

5839'-5843'

5922'-5929'

5961'-5970'

Packer @ 4287'

Cement Top @ 1720'  
1124'

*Green River 2262'*

*Confine Zone 3894'-3940'*  
*Garden Gulch 3940'*

*Douglas Creek 4835'*

*232' Base U9DW*

*-312'*

*4700'-4742'*

*80% Bond*

Frac CP 3 and 4 sands as follows:  
45,827# 20/40 sand in 439 bbls Viking I-25 fluid. Treated @ avg press of 1746 psi w/avg rate of 25 BPM. ISIP 1900 psi. Calc flush: 5919 gal. Actual flush: 5964 gal.

Frac CP2 sands as follows:  
69,844# 20/40 sand in 574 bbls Viking I-25 fluid. Treated @ avg press of 1920 psi w/avg rate of 24.9 BPM. ISIP 1950 psi. Calc flush: 5793 gal. Actual flush: 5796 gal.

Frac LOLODC sands as follows:  
251,133# 20/40 sand in 1650 bbls Viking I-25 fluid. Treated @ avg press of 2106 psi w/avg rate of 25.3 BPM. ISIP 2280 psi. Calc flush: 5476 gal. Actual flush: 5502 gal.

Frac UPLDC and A3 sands as follows:  
149,764# 20/40 sand in 1031 bbls Viking I-25 fluid. Treated @ avg press of 2720 psi w/avg rate of 27.5 BPM. ISIP 3600 psi. Calc flush: 5299 gal. Actual flush: 5334 gal.

Frac B 1, 2 and A.5 sands as follows:  
119,524# 20/40 sand in 837 bbls Viking I-25 fluid. Treated @ avg press of 1293 psi w/avg rate of 25.5 BPM. ISIP 1450 psi. Calc flush: 5116 gal. Actual flush: 5124 gal.

Frac D2 sands as follows:  
34,828# 20/40 sand in 341 bbls Viking I-25 fluid. Treated @ avg press of 1620 psi w/avg rate of 25.8 BPM. ISIP 1920 psi. Calc flush: 4888 gal. Actual flush: 4914 gal.

Frac GB 6 sands as follows:  
39,842# 20/40 sand in 362 bbls Viking I-25 fluid. Treated @ avg press of 2045 psi w/avg rate of 25.5 BPM. ISIP 2140 psi. Calc flush: 4426 gal. Actual flush: 4452 gal.

Frac GB 4 sands as follows:  
35,873# 20/40 sand in 362 bbls Viking I-25 fluid. Treated @ avg press of 2320 psi w/avg rate of 25.2 BPM. ISIP 2230 psi. Calc flush: 4320 gal. Actual flush: 4242 gal.

Parted Rods. Update rods details.  
Parted Rods. Update rod details.

## PERFORATION RECORD

Date	Depth	Length	Tool Joint	Holes
10/29/03	5961'-5970'	9'	4 JSPP	36 holes
10/29/03	5922'-5929'	7'	4 JSPP	28 holes
11/04/03	5839'-5843'	4'	4 JSPP	16 holes
11/04/03	5796'-5818'	22'	2 JSPP	44 holes
11/04/03	5613'-5620'	7'	2 JSPP	14 holes
11/04/03	5594'-5600'	6'	2 JSPP	12 holes
11/04/03	5577'-5586'	9'	2 JSPP	18 holes
11/04/03	5560'-5566'	6'	2 JSPP	12 holes
11/04/03	5535'-5549'	14'	2 JSPP	28 holes
11/04/03	5512'-5518'	6'	2 JSPP	12 holes
11/04/03	5478'-5504'	26'	2 JSPP	52 holes
11/04/03	5414'-5428'	14'	2 JSPP	28 holes
11/04/03	5389'-5400'	11'	2 JSPP	22 holes
11/04/03	5377'-5385'	8'	2 JSPP	16 holes
11/04/03	5346'-5356'	10'	2 JSPP	20 holes
11/04/03	5301'-5305'	4'	2 JSPP	8 holes
11/05/03	5182'-5198'	16'	2 JSPP	32 holes
11/05/03	5146'-5169'	23'	2 JSPP	46 holes
11/05/03	5130'-5135'	5'	2 JSPP	10 holes
11/05/03	5118'-5122'	4'	2 JSPP	8 holes
11/05/03	4890'-4899'	9'	4 JSPP	36 holes
11/05/03	4428'-4440'	12'	4 JSPP	48 holes
11/05/03	4322'-4334'	12'	4 JSPP	48 holes

PBTD @ 6096'

SHOE 6113'

TD @ 6179'

*Est. Workover 6226*

## NEWFIELD



Federal 11-31-8-18

2007' FSL & 1996' FWL

NESW Section 31-T8S-R18E

Uintah Co, Utah

API #43-047-34501; Lease #UTU-74404



## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

#### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

<b>WELL NAME:</b> Federal 11-31-8-18	
<b>TYPE OF TEST</b>	<b>DATE DUE</b>
Pore Pressure	Prior to authorization to inject.
Radioactive Tracer Survey (2)	Within 180 days following commencement of injection and at least once every five (5) years thereafter.
Standard Annulus Pressure	Prior to authorization to inject and at least once every five (5) years thereafter.
Step Rate Test	Within 180 days following commencement of injection.

## APPENDIX C

### OPERATING REQUIREMENTS

#### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
Federal 11-31-8-18	1,360

#### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: Federal 11-31-8-18			
FORMATION NAME	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
Green River	3,910.00 - 6,226.00		0.750

#### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

#### MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

**Newfield Production Company**  
**1410 Seventeenth Street - Suite 1000**  
**Denver, CO 80202**

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

See diagram.

All cement plugs will be set with tubing.

9.2 ppg plugging gel, or fresh water weighted with bentonite or treated brine will be placed between all cement plugs.

The following Plugging and Abandonment Plan, as proposed by the permittee, is predicated on the permittee not revising the injection perforations cited on the schematic diagram of well construction/conversion. Should the uppermost perforations, currently 4322 feet to 4334 feet, be changed in conversion, the EPA will modify the P&A Plan accordingly.

PLUG NO. 1: A Cast Iron Bridge Plug (CIBP) at 4227 feet with 100 feet of Class "G" cement on CIBP.

PLUG NO. 2: A 300-foot Class "G" cement plug from 2000 feet to 2300 feet. This plug will cover a water zone and the top of the Green River Formation.

PLUG NO. 3: Perforate at 363 feet with 4 JSPF. Circulate Class G cement down the 5-1/2 inch casing and up the 5-1/2 inch X 8-5/8 casings annulus.

## FEDERAL 11-31-8-18

Spud Date: 10/9/03  
Put on Production: 11/12/03

GL: 4982' KB: 4994'

SURFACE CASING

CSG SIZE: 8-5/8"

GRADE: J-55

WEIGHT: 24#

LENGTH: 7 jts. (302.79')

DEPTH LANDED: 312.79' KB *Base USDWs 232'*

HOLE SIZE: 12-1/4"

CEMENT DATA: 150 sxs Class "G" cmt, est 4 bbls cmt to surf.

Proposed P & A  
Wellbore Diagram

Circulate 114 sxs Class G Cement down 5-1/2" casing and up the 5-1/2" x 8-5/8" annulus.

Casing Shoe @ 313'

Perforate with 4 JSPP @ 363'

Cement Top @ 1720'

*- 11.24' TOC/FPA*

PRODUCTION CASING

CSG SIZE: 5-1/2"

GRADE: J-55

WEIGHT: 15.5#

LENGTH: 143 jts. (6115.27')

DEPTH LANDED: 6113.27' KB

HOLE SIZE: 7-7/8"

CEMENT DATA: 285 sxs Prem, Lite II mixed & 495 sxs 50/50 POZ.

CEMENT TOP AT: 1720'

*300' Balanced Plug 2008' - 2300', Class G  
Cement over water zone & top Green River  
- 2262 Green River*

*Confining Zone 3894 - 3910 -  
Garden Gulch 3910' -*

100' (12 sxs) Class G Cement plug on top of CIBP

CIBP @ 4227'

4322' - 4334'

4428' - 4440'

4690' - 4899'

5118' - 5122'

5130' - 5135'

5146' - 5169'

5182' - 5198'

5301' - 5305'

5346' - 5356'

5377' - 5385'

5389' - 5400'

5414' - 5428'

5478' - 5504'

5512' - 5518'

5535' - 5549'

5560' - 5566'

5577' - 5586'

5594' - 5600'

5613' - 5620'

5796' - 5818'

5839' - 5843'

5922' - 5929'

5961' - 5970'

*4700' - 4742' 80% Bond*

*Tongues Creek 4835 -*

PBTD @ 6096'

SHOE 6113'

TD @ 6179'

*- 6101' Basal Carbonate*

*Est. Washakie 6226'*

## NEWFIELD



Federal 11-31-8-18

2007' FSL & 1996' FWL

NESW Section 31-T8S-R18E

Uintah Co, Utah

API #43-047-34501; Lease #UTU-74404

## **APPENDIX F**

### **CORRECTIVE ACTION REQUIREMENTS**

No corrective action is required for this well.

**STATEMENT OF BASIS**  
**RECEIVED**

**NOV 24 2006**

DIV. OF OIL, GAS & MINING  
**NEWFIELD PRODUCTION COMPANY**  
**FEDERAL 11-31-8-18**  
**UINTAH COUNTY, UT**

**EPA PERMIT NO. UT21025-06978**

**CONTACT:** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
999 18th Street, Suite 300  
Denver, Colorado 80202-2466  
Telephone: 1-800-227-8917 ext. 6174



This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other federal, state or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

## PART I. General Information and Description of Facility

Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

on

September 26, 2005

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

Federal 11-31-8-18  
2007' FSL & 1996' FWL, NESW S31, T8S, R18E  
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

The Federal No. 11-31-8-18 is currently an active Green River Formation oil well with production perforations in the Garden Gulch and Douglas Creek Members. The applicant intends to convert this facility to a Class II enhanced recovery injection well.

TABLE 1.1		
WELL STATUS / DATE OF OPERATION		
CONVERSION WELLS		
Well Name	Well Status	Date of Operation
Federal 11-31-8-18	Conversion	N/A

## Hydrogeologic Setting

The proposed injection well is located in the Newfield Production Company Greater Monument Butte area near the center of the broad, gently northward dipping south flank of the Uinta Basin. The beds dip at about 200'/mile, and there are no known surface folds or faults in the field. The lower 600' to 800' of the Uinta Formation, generally consisting of 5' to 20' thick brown lenticular fluvial sandstone and interbedded varicolored shales, outcrops at the surface in this area. The Uinta is underlain by the Green River Formation which consists of lake (lacustrine) margin sandstones, limestone and shale beds that were deposited along the edges and on the broad level floor of Lake Uinta as it expanded and contracted through time. Underlying the Green River Formation is the Wasatch Formation, which is approximately 2400' thick in this area and consists of red alluvial shales and siltstone with scattered lenticular sandstones usually 10' to 50' thick. Below the Wasatch Formation is the Mesaverde Formation; a series of interbedded continental deposits of shale, sandstone, and coal. Water samples from Mesaverde sands in the nearby Natural Buttes Unit yield highly saline water.

The Uinta Basin is a topographic and structural trough encompassing an area of more than 9300 square mi (14,900 km ) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-west-trending Uinta Mountains, and a gently dipping south flank. The Uinta Basin formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by ancestral Lake Uinta. Deposition in and around Lake Uinta consisted of open- to marginal-lacustrine sediments that make up the Green River Formation. Alluvial red-bed deposits that are laterally equivalent to and intertongue with the Green River make up the Colton Formation (Wasatch). More than 450 million barrels of oil (63 MT) have been produced from the Green River and Wasatch Formations in the Uinta Basin. The southern shore of Lake Uinta was very broad and flat, which allowed large transgressive and regressive shifts in the shoreline in response to climatic and tectonic-induced rise and fall of the lake. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked deltaic deposits. Distributary-mouth bars, distributary channels, and near-shore bars are the primary producing sandstone reservoirs in the area (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report 4/1/99 - 9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103). The Tertiary Duchesne River Formation alluvium generally is present at the surface in this area.

Throughout the current Newfield Production Company area of enhanced recovery injection activity, i.e., T8-9S - R15-19E, Green River Formation water analyses generally exhibit total dissolved (TDS) content well in excess of 10,000 mg/l. A few recent applications for well conversion to enhanced recovery injection contain Green River water analyses with TDS approximating 10,000 mg/l. The State of Utah-Natural Resources ascribes low TDS values to several possibilities involving dilution of Green River water with high TDS values, e.g., recharge of the Green River Formation via Green River Formation outcrop on the Book Cliffs/Roan Cliffs; injection of very low TDS Johnson Water District Reservoir source water; and percolation of surface water via deep-seated Gilsonite veins penetrating lower Green River Members.

### Geologic Setting (TABLE 2.1)

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**Federal 11-31-8-18**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta	0.00	2,262.00	< 10,000.00	Alternating lacustrine sand-shale-carbonates with fluvial sand and shale.
Green River	2,262.00	6,226.00	17,736.00	Lacustrine carbonates, sand, shale interbedded with fluvial sand and shale.

**Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The approved interval for enhanced recovery injection is located between the top of the Garden Gulch Member (3910 feet) and the estimated top of the Wasatch Formation at 6226 feet.

**TABLE 2.2**  
**INJECTION ZONES**  
**Federal 11-31-8-18**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River	3,910.00	6,226.00	17,736.00	0.750		N/A

\* C - Currently Exempted  
E - Previously Exempted  
P - Proposed Exemption  
N/A - Not Applicable

### Confining Zone(s) (TABLE 2.3)

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The 16-foot shale Confining Zone overlies the top of the Garden Gulch Member between the depths of 3894 feet and 3910 feet.

**TABLE 2.3**  
**CONFINING ZONES**  
**Federal 11-31-8-18**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River	Shale	3,894.00	3,910.00

### Underground Sources of Drinking Water (USDWs) (TABLE 2.4)

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

The State of Utah "Water Wells and Springs", <http://NRWRT1.State.UT.US>, does not identify public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around the Federal 11-31-8-18.

Technical Publication No. 92: State of Utah, Department of Natural Resources, identifies the base of the Underground Sources of Drinking Water (USDWs) in the Uinta Formation, approximately 232 feet from the surface.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**Federal 11-31-8-18**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta	Predominantly fluvial sand and shale.	0.00	232.00	< 10,000.00

### PART III. Well Construction (40 CFR 146.22)

The Federal No. 11-31-8-18 was drilled to a total depth of 6179 (KB) feet in the Basal Carbonate Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 312 feet in a 12-1/4 inch hole using 150 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 6113.27 feet (KB) in a 7-7/8 inch hole with 285 sacks of Premium Lite II and 495 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDW's.

The EPA calculates the top of cement as 1124 feet from the surface.

The schematic diagram shows the enhanced recovery injection perforations in the Garden Gulch and Douglas Creek Members of the Green River Formation. Additional perforations may be added at a later time between the depths of 3910 feet and the top of the Wasatch Formation (Estimated to be 6226 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be required to be set no higher than 100 feet above the top perforation.

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**Federal 11-31-8-18**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Production	7.88	5.50	0.00 - 6,113.27	1,124.00 - 6,113.27
Surface	12.25	8.63	0.00 - 312.79	0.00 - 312.79

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

#### **Casing and Cementing (TABLE 3.1)**

The construction plan for the well or wells proposed for conversion to an injection well was evaluated and determined to be in conformance with standard practices and guidelines that ensure

well injection does not result in the movement of fluids into USDWs. Well construction and conversion details for the well or wells are shown in TABLE 3.1.

### Tubing and Packer

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

### Tubing-Casing Annulus (TCA)

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing/casing annulus must be kept closed at all times so that it can be monitored as required under conditions of the Permit.

### Monitoring Devices

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

**TABLE 4.1**  
**AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Federal 10-31-8-18	Producer	No	6,214.00	1,678.00	No
Federal 12-31-8-18	Producer	No	6,104.00	1,568.00	No
Federal 6-31-8-18	Producer	No	6,245.00	1,710.00	No

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

### Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which



penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

### Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

TABLE 4.1 lists the wells in the AOR, and shows the well type, operating status, depth, top of casing cement and whether a CAP is required for this well.

## PART V. Well Operation Requirements (40 CFR 146.23)

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
Federal 11-31-8-18

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River	4,322.00	0.750	1,360

### Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, is prohibited.

The proposed injectate is a blend of source water from the Johnson Water District reservoir and produced Green River Formation water from wells proximate to the Federal No. 11-31-8-18.

### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP),

as measured at the surface, for this Permit,

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)  
fg = fracture gradient (from submitted data or tests)  
sg = specific gravity (of injected fluid)  
d = depth to top of injection zone (or top perforation)

### Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

There will be no restrictions on the cumulative volume of the authorized fluid injected into the Green River Formation interval 3910 feet to the top of the Wasatch Formation which is estimated to be 6226 feet.

### Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

Well construction and site-specific conditions dictate the following requirements for Mechanical Integrity (MI) demonstrations:

**PART I MI:** Internal MI will be demonstrated prior to beginning injection. Since this well is constructed with a standard casing, tubing, and packer configuration, a successful mechanical integrity test (MIT) is required to take place at least once every five (5) years. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing or packer. Part I MI may be demonstrated by a standard tubing-casing annulus pressure test using the maximum permitted injection pressure or 1000 psi, whichever is less, with a ten (10) percent or less pressure loss over thirty (30) minutes.

**PART II MI:** - The CBL indicates that cement does not meet minimum requirements needed to demonstrate zone isolation (at least 18 feet of continuous 80% bond, or better) through the confining zone. Therefore, further testing for Part II MI will be required prior to injection and at least once every five years thereafter. The demonstration shall be by temperature survey or other

approved test. Approved tests for demonstrating Part II MI include a temperature survey, noise log or oxygen activation log, and Region 8 may also accept results of a radioactive tracer survey under certain circumstances.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, injection flow rate and cumulative fluid volume, and the maximum and average value for each must be determined for each month. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with other applicable federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

All cement plugs will be set with tubing.

9.2 ppg plugging gel, or fresh water weighted with bentonite or treated brine will be placed between all cement plugs.

The following Plugging and Abandonment Plan, as proposed by the permittee, is predicated on the permittee not revising the uppermost injection perforations cited on the schematic diagram of well conversion. Should the uppermost perforations, currently 4322 feet to 4334 feet, be changed in conversion, the EPA will modify the P&A Plan.

PLUG NO. 1: Set a cast iron bridge plug (CIBP) at 4227 feet with 100 sacks of Class "G" cement on the CIBP.

PLUG NO. 2: Set a 300-foot Class "G" cement plug from 2000 feet to 2300 feet to cover both a water zone and the top of the Green River Formation.

PLUG NO. 3: Perforate at 363 feet with 4 JSPF. Circulate Class "G" cement down the 5-1/2 inch casing to 363 feet and up the 5-1/2 inch X 8-5/8 inch casings annulus to the surface..

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

A Financial Statement was reviewed and approved by the EPA.

Financial Statement, received April 22, 2005

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UTU-74404

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ OTHER

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:  
SUNDANCE UNIT

2. NAME OF OPERATOR:  
NEWFIELD PRODUCTION COMPANY

8. WELL NAME and NUMBER:  
FEDERAL 11-31-8-18

3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052 PHONE NUMBER 435.646.3721

9. API NUMBER:  
4304734501

4. LOCATION OF WELL:

FOOTAGES AT SURFACE: 2007 FSL 1996 FWL

10. FIELD AND POOL, OR WILDCAT:  
MONUMENT BUTTE

COUNTY: Uintah

OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NESW, 31, T8S, R18E

STATE: UT

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will  	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARITLY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion:  04/25/2007	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input checked="" type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: -
	<input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The subject well has been converted from a producing oil well to an injection well on 4/25/07.

On 5/7/07 Dan Jackson with the EPA was contacted concerning the initial MIT on the above listed well. Permission was given at that time to perform the test on 5/22/07. On 5/22/07 the casing was pressured up to 1230 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 250 psig during the test. There was not an EPA representative available to witness the test. EPA# UT 21025-06978 API# 43-047-34501

Please find enclosed the conversion work detail.

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

**RECEIVED**  
**MAY 31 2007**

DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) Callie Ross

TITLE Production Clerk

SIGNATURE

*Callie Ross*

DATE 05/29/2007

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 05/22/07  
Test conducted by: Dale Giles  
Others present: \_\_\_\_\_

Well Name: <u>Fed. 11-31-8-18</u>	Type: ER SWD	Status: AC TA UC
Field: <u>Sundance Unit</u>		
Location: _____	Sec: <u>31</u> T <u>8</u> N <u>10</u> R <u>18</u> W	County: <u>Uintah</u> State: <u>Ut.</u>
Operator: <u>Newfield Production Co.</u>		
Last MIT: <u>1</u> / <u>1</u>	Maximum Allowable Pressure: _____ PSIG	

Is this a regularly scheduled test? ☐ Yes ☐ No  
Initial test for permit? ☒ Yes ☐ No  
Test after well rework? ☐ Yes ☐ No  
Well injecting during test? ☐ Yes ☐ No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 0 psig

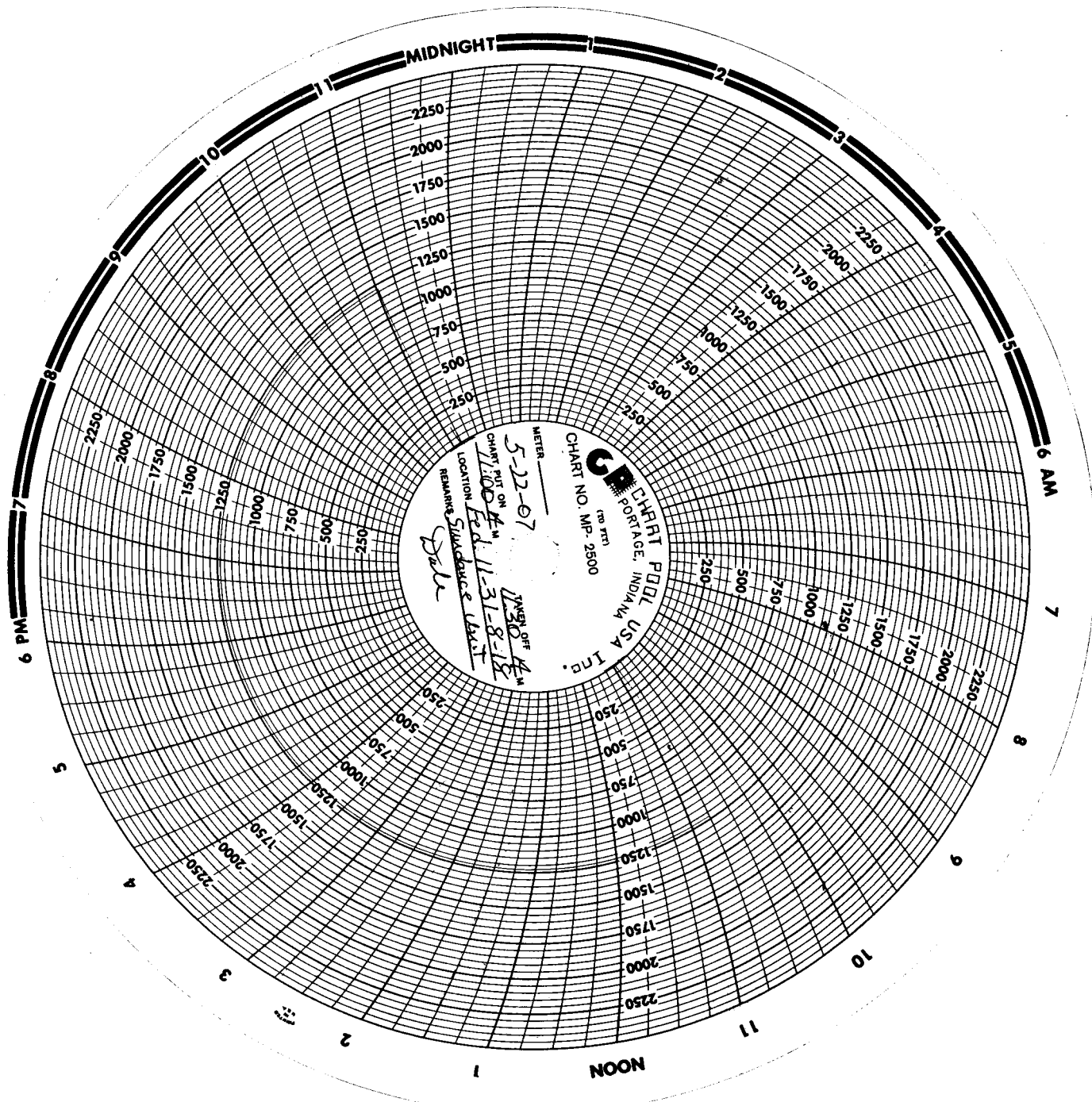
MIT DATA TABLE		Test #1	Test #2	Test #3
<b>TUBING</b>		<b>PRESSURE</b>		
Initial Pressure	<u>250</u> psig	psig	psig	psig
End of test pressure	<u>250</u> psig	psig	psig	psig
<b>CASING / TUBING</b>		<b>ANNULUS PRESSURE</b>		
0 minutes	<u>1230</u> psig	psig	psig	psig
5 minutes	<u>1230</u> psig	psig	psig	psig
10 minutes	<u>1230</u> psig	psig	psig	psig
15 minutes	<u>1230</u> psig	psig	psig	psig
20 minutes	<u>1230</u> psig	psig	psig	psig
25 minutes	<u>1230</u> psig	psig	psig	psig
30 minutes	<u>1230</u> psig	psig	psig	psig
_____ minutes	psig	psig	psig	psig
_____ minutes	psig	psig	psig	psig
RESULT	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test ? ☐ Yes ☒ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_





STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
USA UTU-53995

**SUNDRY NOTICES AND REPORTS ON WELLS**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:  
SUNDANCE UNIT

8. WELL NAME and NUMBER:  
FEDERAL 11-31-8-18

9. API NUMBER:  
4304734501

10. FIELD AND POOL, OR WILDCAT:  
MONUMENT BUTTE

1. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ OTHER

2. NAME OF OPERATOR:  
NEWFIELD PRODUCTION COMPANY

3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052 PHONE NUMBER 435.646.3721

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 2007 FSL 1996 FWL

COUNTY: UINTAH

OTR/OTR SECTION. TOWNSHIP. RANGE. MERIDIAN: NESW, 31, T8S, R18E

STATE: UT

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will 07/03/2007	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion:	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: - Change status, put well on injection
	<input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

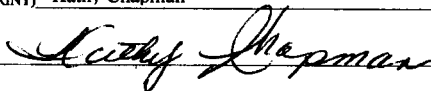
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
The above reference well was put on injection at 12:00 PM on 7-2-07.

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY

NAME (PLEASE PRINT) Kathy Chapman

TITLE Office Manager

SIGNATURE



DATE 07/03/2007

(This space for State use only)

RECEIVED  
JUL 06 2007  
DIV. OF OIL, GAS & MINING



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

**FEB 26 2008**

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Michael Guinn  
District Manager  
Newfield Production Company  
Route 3-Box 3630  
Myton, UT 84502

43 047 34501  
85 18E 31

RE: **Initial Permit Extension**  
EPA UIC Permit UT21025-06978  
Well: Federal 11-31-8-18  
Uintah County, Utah

Dear Mr. Guinn:

The Environmental Protection Agency (EPA) has reviewed your December 26, 2007 request for an extension of the reference Class II enhanced recovery Injection Permit. Additional information provided subsequent to the initial request, related to fracturing that occurs in the "B sand" was also considered. The EPA will extend UIC Permit UT21025-06978 for 120 days, commencing February 15, 2008, and ending June 14, 2008.

Please remember that it is your responsibility to be aware of and to comply with all conditions of the Permit. If you have any questions regarding this approval, please call Margo Smith at 800-227-8917, extension 312-6318.

Sincerely,

Steven J. Pratt, P.E., CAPM (inactive)  
Director, Groundwater Program

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

cc: Curtis Cesspooch, Chairperson  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Ronald Groves, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Irene Cuch, Vice-Chairwoman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Steven Cesspooch, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Phillip Chimburas, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Frances Poowegup, Councilwoman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Chester Mills, Superintendent  
BIA - Uintah & Ouray Indian Agency

Shawn Chapoose, Director  
Land Use Department  
Ute Indian Tribe

Gil Hunt  
Assistant Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Eric Sundberg  
Regulatory Analyst  
Newfield Exploration Company

SEARCHED  
SERIALIZED  
INDEXED  
FILED  
JUN 10 1998  
FBI - DENVER

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
USA UTU-53995

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ OTHER

2. NAME OF OPERATOR:  
NEWFIELD PRODUCTION COMPANY

3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052 PHONE NUMBER 435.646.3721

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 2007 FSL 1996 FWL

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:  
SUNDANCE UNIT

8. WELL NAME and NUMBER:  
FEDERAL 11-31-8-18

9. API NUMBER:  
4304734501

10. FIELD AND POOL, OR WILDCAT:  
MONUMENT BUTTE

COUNTY: UINTAH

OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NESW, 31, T8S, R18E

STATE: UT

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will _____	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/STOP) <input type="checkbox"/> RECLAMATION OF WELL SITE <input checked="" type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLAIR <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input type="checkbox"/> OTHER: -
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion: 03/12/2007			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The above subject well had Major Workover (hole in tubing) procedures performed on 03/06/08 attached is a daily status report. On 03/04/08 Margo Smith with the EPA was contacted concerning the MIT on the above listed well. Permission was given at that time to perform the test on 03/10/08. On 03/10/08 the csg was pressured up to 1830 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 0 psig during the test. There was not an EPA representative available to witness the test.  
EPA 21025-06978  
API 4304734501

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

NAME (PLEASE PRINT) Jenni Park

TITLE Production Clerk

SIGNATURE

DATE 03/12/2008

(This space for State use only)

**RECEIVED  
MAR 14 2008  
DIV. OF OIL, GAS & MINING**

## Daily Activity Report

Format For Sundry

**FEDERAL 11-31-8-18****1/1/2008 To 5/30/2008****3/5/2008 Day: 1****Workover**

NC #2 on 3/4/2008 - MI NC #2. Wait for grader to pull rig into wellhead due to mud. RU. ND wellhead. NU BOPs. RU rig floor. RU hot oil truck. Flush tbg w/ 40 BW @ 250°. Release Arrowset 1-X packer. TOO H w/ tbg as detailed below (tallying). RU wireline truck. RIH w/ 4 3/4" gauge ring to 5750'. POOH w/ wireline. RIH w/ Arrowpac 5 1/2" X 3" retrievable seal bore packer & set w/ CE @ 5996.55' & top of packer @ 5695'. POOH & RD wireline. PU BHA & TIH w/ tbg as follows: Locator sub, 1- jt 2 7/8" tbg, Sliding sleeve, 42- jts 2 7/8" tbg, Arrowset 1-X packer, Seal nipple, on/off tool, 129- jts 2 7/8" J-55 tbg, 1- 6',8',10' X 2 7/8" J-55 tbg subs, 1- jt 2 7/8" J-55 tbg. SDFN.

---

**3/6/2008 Day: 2****Workover**

NC #2 on 3/5/2008 - RU hot oil truck. Flush tbg w/ 20 BW @ 250°. RU PLS wireline. RIH w/ "X" plug on wireline & set in "X" nipple @ 4262'. Pump 30 BW down tbg w/o filling tbg. RIH w/ wireline & retrieve "X" plug. RIH w/ "X" plug & set @ 4262'. Fill tbg w/ 18 BW. Could not get over 1300 psi on tbg. RIH w/ wireline & retrieve "X" plug. Re-dress "X" plug w/ new O-rings. RIH w/ "X" plug on wireline & set in "X" nipple @ 4262'. Fill tbg w/ 16 BW. Could not get over 2100 psi on tbg. TOO H w/ 129- jts 2 7/8 J-55 tbg (looking for hole). Test tbg w/ 1-jt above "X" plug & nipple, could not get over 1000 psi on tbg. TOO H w/ 1- jt to "X" plug. Break down "X" plug & found broken O-ring. Re-build "X" plug. TIH w/ "X" plug & 1- jt tbg, pressure test to 3000 psi for 10 min. TIH w/ 129- jts tbg (w/ "X" plug in place). Fill tbg w/ 18 BW & pressure tbg to 3000 psi. Held pressure test for 30 minutes w/ 200 psi loss. SDFN.

---

**3/7/2008 Day: 3****Workover**

NC #2 on 3/6/2008 - RU hot oil truck. Thaw tbg & check pressure, pressure had dropped from 2800 psi to 1800 psi over night. Pressure tbg to 3000 psi. Held pressure for 30 minutes w/ no loss. RU PLS wireline. RIH w/ wireline & retrieve "X" plug. RD wireline. RD rig floor. ND BOPs. Pump 90 bbls packer fluid down tbg- csg annulus. Set Arrowset 1-X packer w/ CE @ 4265' & 16000# tension. NU wellhead. Fill annulus w/ 20 bbls packer fluid. Pressure annulus to 1400 psi. Bled off trapped air as needed & re- pressured to 1400 psi. Held pressure test for 30 minutes w/ no loss. Hook up injection lines to wellhead. RD NC #2. Wait for grader to pull rig out of mud. Ready for MIT!

---

**3/11/2008 Day: 4****Workover**

on 3/10/2008 - On 3/4/08 Margo Smith with the EPA was contacted concerning the MIT on the above listed well (Fed 11-31-8-18). Permission was given at that time to perform the test on 3/10/08. On 3/10/08 the csg was pressured up to 1830 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 0 psig during the test. There was not an EPA representative available to witness the test. EPA# 21025-06978 API# 43-0437-34501

---

**Pertinent Files: Go to File List**

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 03/10/08  
Test conducted by: Dale Giles  
Others present: \_\_\_\_\_

Well Name: <u>Federal 11-31-8-18</u>	Type: ER SWD	Status: AC TA UC
Field: <u>Sundance Unit</u>		
Location: _____	Sec: <u>31</u> T <u>8</u> N <u>10</u> R <u>18</u> <u>6</u> /W	County: <u>Uintah</u> State: <u>Ut</u>
Operator: <u>Newfield production Co.</u>		
Last MIT: <u>/</u> <u>/</u> <u>/</u>	Maximum Allowable Pressure: <u>1360</u>	PSIG

Is this a regularly scheduled test? ☐ Yes ☐ No  
Initial test for permit? ☐ Yes ☐ No  
Test after well rework? ☒ Yes ☐ No  
Well injecting during test? ☐ Yes ☒ No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 0 psig

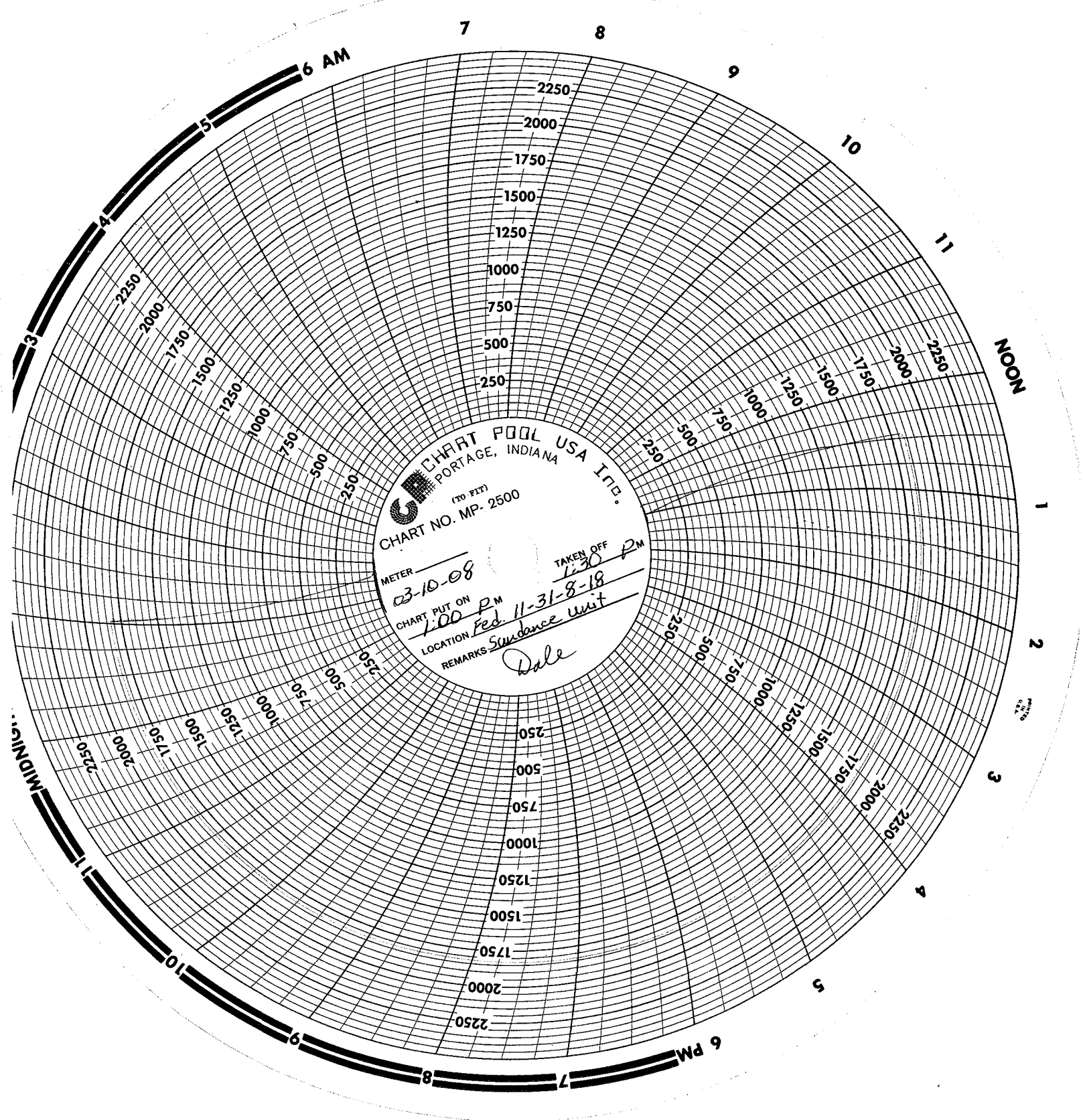
MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>0</u> psig	psig	psig
End of test pressure	<u>0</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1830</u> psig	psig	psig
5 minutes	<u>1830</u> psig	psig	psig
10 minutes	<u>1830</u> psig	psig	psig
15 minutes	<u>1830</u> psig	psig	psig
20 minutes	<u>1830</u> psig	psig	psig
25 minutes	<u>1830</u> psig	psig	psig
30 minutes	<u>1830</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test? ☐ Yes ☒ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_





UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

1. Type of Well

☒ Oil Well ☐ Gas Well ☒ Other *WI*

2. Name of Operator

NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630

Myton, UT 84052

3b. Phone (include area code)

435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2007 FSL 1996 FWL

NESW Section 31 T8S R18E

5. Lease Serial No.

USA UTU-53995

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or

SUNDANCE UNIT

8. Well Name and No.

FEDERAL 11-31-8-18

9. API Well No.

4304734501

10. Field and Pool, or Exploratory Area

MONUMENT BUTTE

11. County or Parish, State

UINTAH, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production(Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Step Rate Test _____	
	<input type="checkbox"/> Convert to	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	_____	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A step rate test was conducted on the subject well on April 28, 2008. Results from the test indicate that the fracture gradient is .768 psi/ft. Therefore, Newfield is requesting that the maximum allowable injection pressure (MAIP) be changed to 1415 psi.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**

I hereby certify that the foregoing is true and  
correct (Printed/ Typed)

Chevenne Bateman

Signature

Title

Well Analyst Foreman

Date

05/05/2008

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or  
certify that the applicant holds legal or equitable title to those rights in the subject lease  
which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United  
States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on reverse)

**RECEIVED**

**MAY 12 2008**

**DIV. OF OIL, GAS & MINING**

## Step Rate Test (SRT) Analysis

Date: 05/05/2008

Operator:

Newfield Production Company

Well:

Federal 11-31-8-18

Permit #:

UT21025-06978

*Enter the following data :*

Specific Gravity (sg) of injectate =	<u>1.015</u>	g/cc	
Depth to top perforation (D) =	<u>4322</u>	feet	4322
Top of permitted injection zone depth (blank=use top perforation to calculate fg) =		feet	
Estimated Formation Parting Pressure (Pfp) from SRT chart =	<u>1420</u>	psi	
Instantaneous Shut In Pressure (ISIP) from SRT =	<u>1420</u>	psi	1420
Bottom Hole Parting Pressure (Pbhp) from downhole pressure recorder =		psi	no downhole

### Part One - Calculation of Fracture Gradient (fg)

Calculated Fracture Gradient = 0.768 psi/ft.

where:  $fg = Pbhp / D$  (Note: this formula uses the downhole recorded bottom hole parting pressure if available) = 1420

D = depth used = 4322

Pbhp used = 3319

Calculated Bottom Hole Parting Pressure (Pbhp) = 3319 psi

3319.497

to calculate Bottom Hole Parting Pressure (Pbhp) = Formation Fracture Pressure (ISIP or Pfp) + (0.433 \* SG \* D)

(Uses lesser of ISIP or Pfp) Value used = 1420

### Part Two - Calculation of Maximum Allowable Injection Pressure (MAIP)

Maximum Allowable Injection Pressure (MAIP) = 1415 psig

D = depth used = 4322

MAIP =  $[fg \cdot (0.433 \cdot SG)] \cdot D = 1419.799$

(rounded down to nearest 5 psig)

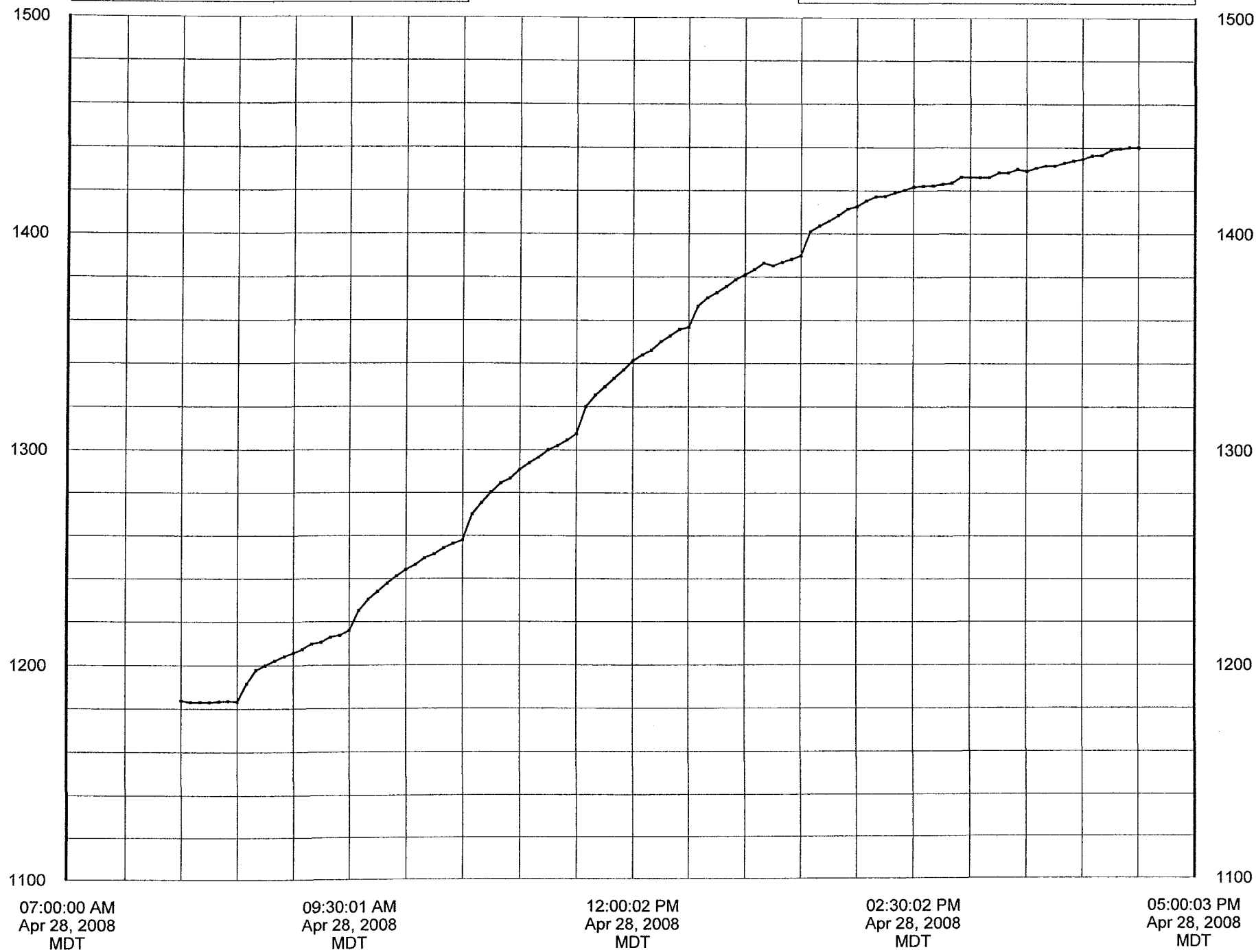
PSIA

Absolute Pressure

Federal 11-31-8-18 SRT (4-28-08)

Device - PrTemp1000  
Serial Number - M75866  
Device ID - PrTemp

PSIA



Report Name: PrTemp1000 Data Table  
 Report Date: May 05, 2008 03:06:36 PM MDT  
 File Name: S:\Welinfo\PTC® Instruments 2.00\Federal 11-31-8-18 SRT (4-28-08).csv  
 Title: Federal 11-31-8-18 SRT (4-28-08)  
 Device: PrTemp1000 - Temperature and Pressure Recorder  
 Hardware Revision: REV2C (64K)  
 Serial Number: M75866  
 Device ID: PrTemp  
 Data Start Date: Apr 28, 2008 08:00:00 AM MDT  
 Data End Date: Apr 28, 2008 04:29:59 PM MDT  
 Reading Rate: 1 Minute  
 Readings: 1 to 103 of 103  
 Last Calibration Date: Dec 19, 2007  
 Next Calibration Date: Dec 19, 2008

<u>Reading</u>	<u>Date and Time (MDT)</u>	<u>Absolute Pressure</u>	<u>Annotation</u>
1	Apr 28, 2008 08:00:00 AM	1183.800	PSIA
2	Apr 28, 2008 08:04:59 AM	1183.000	PSIA
3	Apr 28, 2008 08:10:00 AM	1183.000	PSIA
4	Apr 28, 2008 08:14:59 AM	1183.000	PSIA
5	Apr 28, 2008 08:20:07 AM	1183.400	PSIA
6	Apr 28, 2008 08:24:59 AM	1183.600	PSIA
7	Apr 28, 2008 08:30:00 AM	1183.400	PSIA
8	Apr 28, 2008 08:34:59 AM	1191.600	PSIA
9	Apr 28, 2008 08:40:00 AM	1197.800	PSIA
10	Apr 28, 2008 08:45:00 AM	1200.000	PSIA
11	Apr 28, 2008 08:49:59 AM	1202.200	PSIA
12	Apr 28, 2008 08:55:00 AM	1204.200	PSIA
13	Apr 28, 2008 08:59:59 AM	1205.800	PSIA
14	Apr 28, 2008 09:05:00 AM	1207.400	PSIA
15	Apr 28, 2008 09:09:59 AM	1209.800	PSIA
16	Apr 28, 2008 09:15:00 AM	1210.600	PSIA
17	Apr 28, 2008 09:19:59 AM	1213.000	PSIA
18	Apr 28, 2008 09:25:00 AM	1213.800	PSIA
19	Apr 28, 2008 09:30:00 AM	1216.000	PSIA
20	Apr 28, 2008 09:34:59 AM	1225.200	PSIA
21	Apr 28, 2008 09:40:00 AM	1230.400	PSIA
22	Apr 28, 2008 09:44:59 AM	1234.000	PSIA
23	Apr 28, 2008 09:50:00 AM	1237.800	PSIA
24	Apr 28, 2008 09:54:59 AM	1241.200	PSIA
25	Apr 28, 2008 10:00:00 AM	1244.200	PSIA
26	Apr 28, 2008 10:04:59 AM	1246.400	PSIA
27	Apr 28, 2008 10:10:00 AM	1249.600	PSIA
28	Apr 28, 2008 10:15:00 AM	1251.400	PSIA
29	Apr 28, 2008 10:19:59 AM	1254.200	PSIA
30	Apr 28, 2008 10:25:00 AM	1256.200	PSIA
31	Apr 28, 2008 10:29:59 AM	1257.800	PSIA
32	Apr 28, 2008 10:35:00 AM	1270.000	PSIA
33	Apr 28, 2008 10:39:59 AM	1275.400	PSIA
34	Apr 28, 2008 10:45:00 AM	1280.400	PSIA
35	Apr 28, 2008 10:49:59 AM	1284.600	PSIA
36	Apr 28, 2008 10:55:00 AM	1286.800	PSIA
37	Apr 28, 2008 11:00:00 AM	1291.000	PSIA
38	Apr 28, 2008 11:04:59 AM	1294.000	PSIA
39	Apr 28, 2008 11:10:00 AM	1296.600	PSIA
40	Apr 28, 2008 11:14:59 AM	1300.000	PSIA
41	Apr 28, 2008 11:20:00 AM	1302.000	PSIA
42	Apr 28, 2008 11:24:59 AM	1304.600	PSIA
43	Apr 28, 2008 11:30:00 AM	1307.400	PSIA
44	Apr 28, 2008 11:34:59 AM	1320.000	PSIA
45	Apr 28, 2008 11:40:00 AM	1325.400	PSIA
46	Apr 28, 2008 11:45:00 AM	1329.200	PSIA
47	Apr 28, 2008 11:49:59 AM	1333.200	PSIA
48	Apr 28, 2008 11:55:00 AM	1337.000	PSIA
49	Apr 28, 2008 11:59:59 AM	1341.200	PSIA
50	Apr 28, 2008 12:05:00 PM	1344.000	PSIA
51	Apr 28, 2008 12:09:59 PM	1346.200	PSIA
52	Apr 28, 2008 12:15:00 PM	1350.200	PSIA
53	Apr 28, 2008 12:19:59 PM	1352.800	PSIA
54	Apr 28, 2008 12:25:00 PM	1355.800	PSIA
55	Apr 28, 2008 12:30:00 PM	1356.800	PSIA
56	Apr 28, 2008 12:34:59 PM	1366.600	PSIA
57	Apr 28, 2008 12:40:00 PM	1370.400	PSIA
58	Apr 28, 2008 12:44:59 PM	1372.800	PSIA
59	Apr 28, 2008 12:50:00 PM	1375.600	PSIA
60	Apr 28, 2008 12:54:59 PM	1378.800	PSIA

61	Apr 28, 2008 01:00:00 PM	1381.000	PSIA
62	Apr 28, 2008 01:04:59 PM	1383.400	PSIA
63	Apr 28, 2008 01:10:00 PM	1386.400	PSIA
64	Apr 28, 2008 01:15:00 PM	1385.200	PSIA
65	Apr 28, 2008 01:19:59 PM	1386.800	PSIA
66	Apr 28, 2008 01:25:00 PM	1388.200	PSIA
67	Apr 28, 2008 01:29:59 PM	1389.800	PSIA
68	Apr 28, 2008 01:35:00 PM	1401.000	PSIA
69	Apr 28, 2008 01:39:59 PM	1403.600	PSIA
70	Apr 28, 2008 01:45:00 PM	1405.800	PSIA
71	Apr 28, 2008 01:49:59 PM	1408.400	PSIA
72	Apr 28, 2008 01:55:00 PM	1411.400	PSIA
73	Apr 28, 2008 02:00:00 PM	1412.600	PSIA
74	Apr 28, 2008 02:04:59 PM	1415.200	PSIA
75	Apr 28, 2008 02:10:00 PM	1417.200	PSIA
76	Apr 28, 2008 02:14:59 PM	1417.400	PSIA
77	Apr 28, 2008 02:20:00 PM	1419.000	PSIA
78	Apr 28, 2008 02:24:59 PM	1420.200	PSIA
79	Apr 28, 2008 02:30:00 PM	1421.800	PSIA
80	Apr 28, 2008 02:34:59 PM	1422.200	PSIA
81	Apr 28, 2008 02:40:00 PM	1422.400	PSIA
82	Apr 28, 2008 02:45:00 PM	1423.000	PSIA
83	Apr 28, 2008 02:49:59 PM	1423.600	PSIA
84	Apr 28, 2008 02:55:00 PM	1426.400	PSIA
85	Apr 28, 2008 02:59:59 PM	1426.200	PSIA
86	Apr 28, 2008 03:05:00 PM	1426.200	PSIA
87	Apr 28, 2008 03:09:59 PM	1426.200	PSIA
88	Apr 28, 2008 03:15:00 PM	1428.400	PSIA
89	Apr 28, 2008 03:19:59 PM	1428.400	PSIA
90	Apr 28, 2008 03:25:00 PM	1430.000	PSIA
91	Apr 28, 2008 03:30:00 PM	1429.200	PSIA
92	Apr 28, 2008 03:34:59 PM	1430.600	PSIA
93	Apr 28, 2008 03:40:00 PM	1431.600	PSIA
94	Apr 28, 2008 03:44:59 PM	1431.600	PSIA
95	Apr 28, 2008 03:50:00 PM	1433.000	PSIA
96	Apr 28, 2008 03:54:59 PM	1434.000	PSIA
97	Apr 28, 2008 04:00:00 PM	1434.800	PSIA
98	Apr 28, 2008 04:04:59 PM	1436.400	PSIA
99	Apr 28, 2008 04:10:00 PM	1436.600	PSIA
100	Apr 28, 2008 04:15:00 PM	1439.000	PSIA
101	Apr 28, 2008 04:19:59 PM	1439.600	PSIA
102	Apr 28, 2008 04:25:00 PM	1440.200	PSIA
103	Apr 28, 2008 04:29:59 PM	1440.200	PSIA

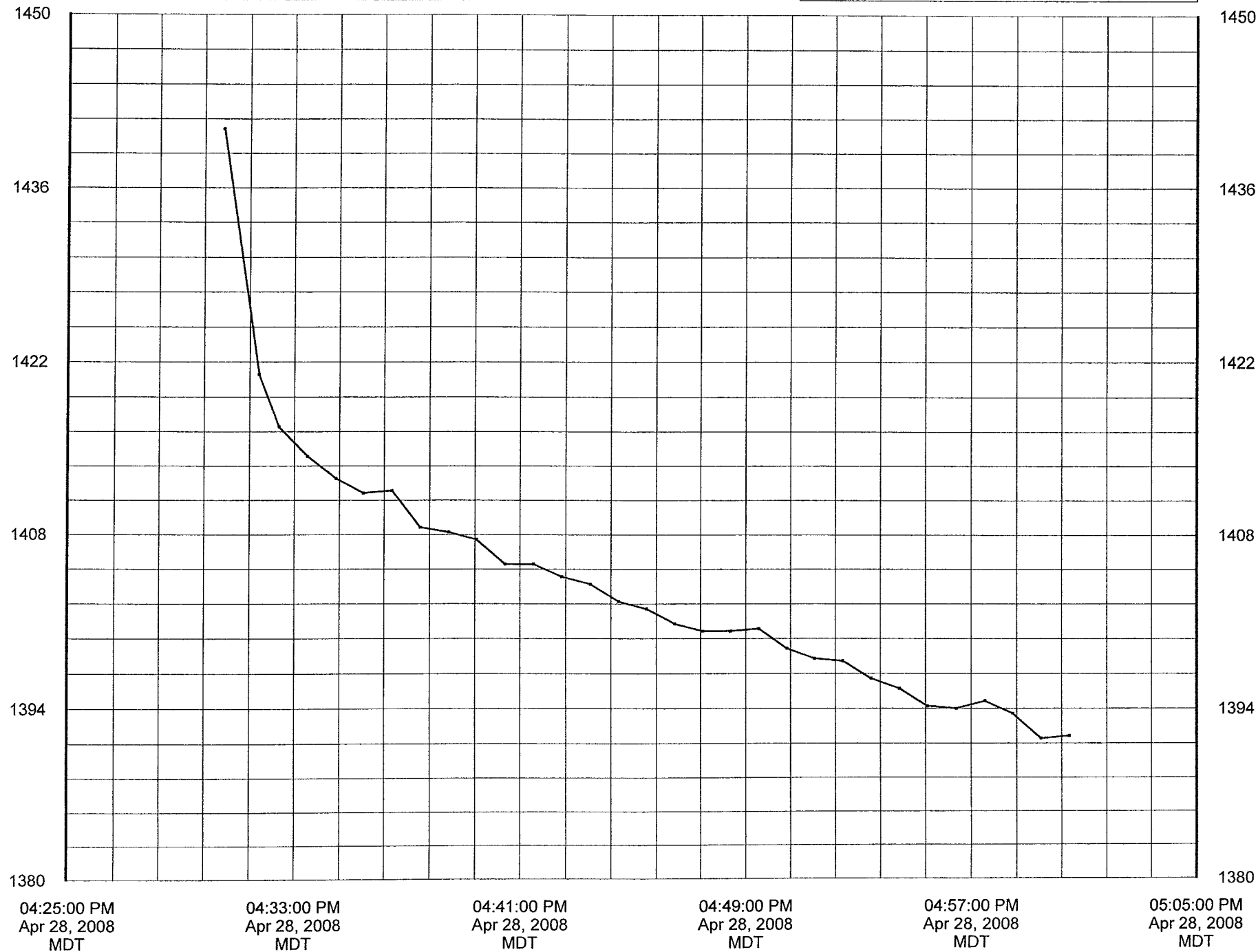
PSIA

Absolute Pressure

Federal 11-31-8-18 ISIP (4-28-08)

Device - PrTemp1000  
Serial Number - M75866  
Device ID - PrTemp

PSIA



Report Name: PrTemp1000 Data Table  
 Report Date: May 05, 2008 03:06:23 PM MDT  
 File Name: S:\WVinfo\PTC@ Instruments 2.00\Federal 11-31-8-18 ISIP (4-28-08).csv  
 Title: Federal 11-31-8-18 ISIP (4-28-08)  
 Device: PrTemp1000 - Temperature and Pressure Recorder  
 Hardware Revision: REV2C (64K)  
 Serial Number: M75866  
 Device ID: PrTemp  
 Data Start Date: Apr 28, 2008 04:30:28 PM MDT  
 Data End Date: Apr 28, 2008 05:00:28 PM MDT  
 Reading Rate: 1 Minute  
 Readings: 1 to 31 of 31  
 Last Calibration Date: Dec 19, 2007  
 Next Calibration Date: Dec 19, 2008

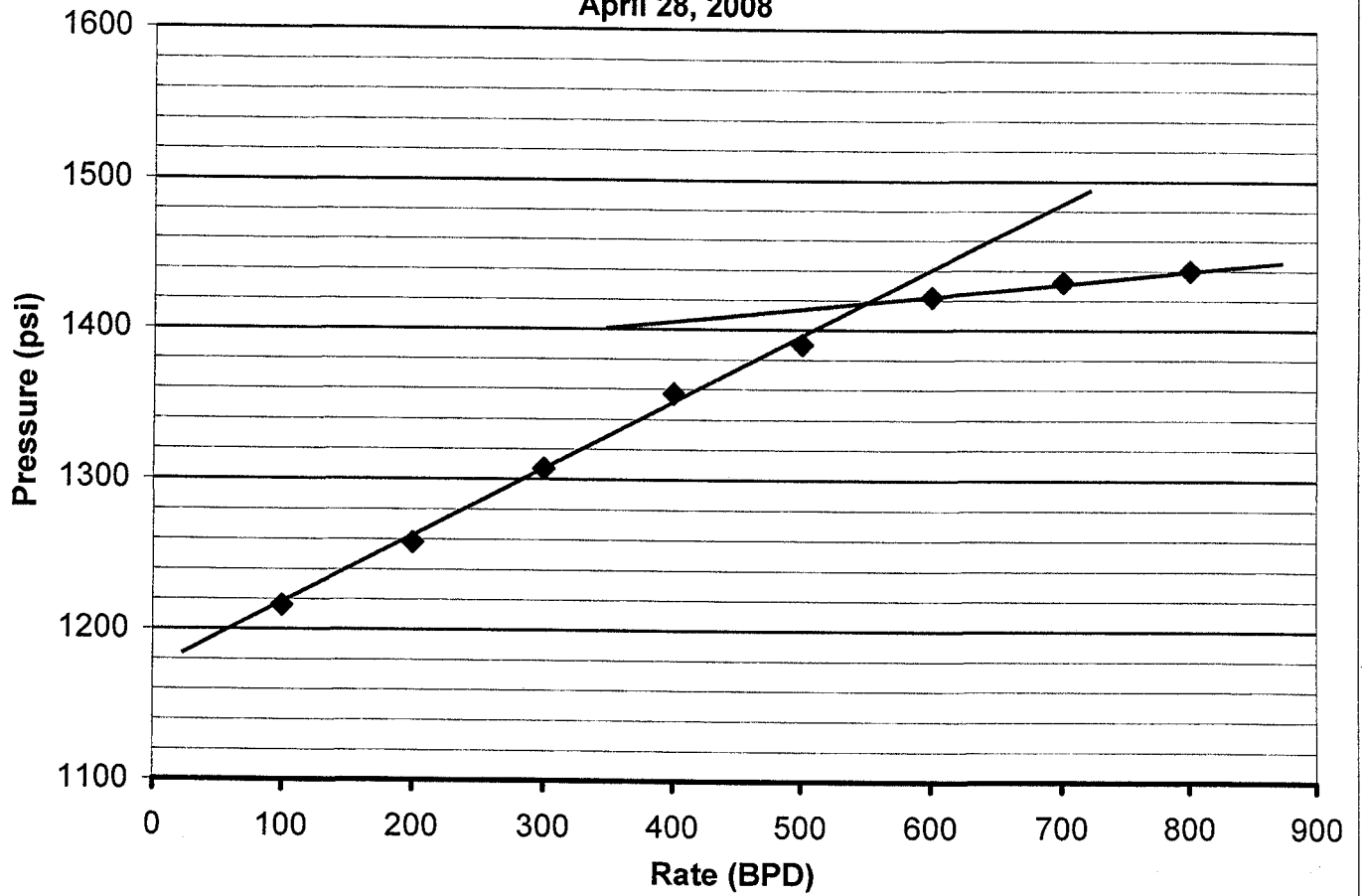
<u>Reading</u>	<u>Date and Time (MDT)</u>	<u>Absolute Pressure</u>	<u>Annotation</u>
1	Apr 28, 2008 04:30:28 PM	1440.800	PSIA
2	Apr 28, 2008 04:31:44 PM	1421.000	PSIA
3	Apr 28, 2008 04:32:27 PM	1416.800	PSIA
4	Apr 28, 2008 04:33:28 PM	1414.400	PSIA
5	Apr 28, 2008 04:34:28 PM	1412.600	PSIA
6	Apr 28, 2008 04:35:27 PM	1411.400	PSIA
7	Apr 28, 2008 04:36:28 PM	1411.600	PSIA
8	Apr 28, 2008 04:37:28 PM	1408.600	PSIA
9	Apr 28, 2008 04:38:28 PM	1408.200	PSIA
10	Apr 28, 2008 04:39:27 PM	1407.600	PSIA
11	Apr 28, 2008 04:40:28 PM	1405.600	PSIA
12	Apr 28, 2008 04:41:28 PM	1405.600	PSIA
13	Apr 28, 2008 04:42:27 PM	1404.600	PSIA
14	Apr 28, 2008 04:43:28 PM	1404.000	PSIA
15	Apr 28, 2008 04:44:28 PM	1402.600	PSIA
16	Apr 28, 2008 04:45:27 PM	1402.000	PSIA
17	Apr 28, 2008 04:46:28 PM	1400.800	PSIA
18	Apr 28, 2008 04:47:28 PM	1400.200	PSIA
19	Apr 28, 2008 04:48:27 PM	1400.200	PSIA
20	Apr 28, 2008 04:49:28 PM	1400.400	PSIA
21	Apr 28, 2008 04:50:28 PM	1398.800	PSIA
22	Apr 28, 2008 04:51:27 PM	1398.000	PSIA
23	Apr 28, 2008 04:52:28 PM	1397.800	PSIA
24	Apr 28, 2008 04:53:28 PM	1396.400	PSIA
25	Apr 28, 2008 04:54:28 PM	1395.600	PSIA
26	Apr 28, 2008 04:55:27 PM	1394.200	PSIA
27	Apr 28, 2008 04:56:28 PM	1394.000	PSIA
28	Apr 28, 2008 04:57:28 PM	1394.600	PSIA
29	Apr 28, 2008 04:58:27 PM	1393.600	PSIA
30	Apr 28, 2008 04:59:28 PM	1391.600	PSIA
31	Apr 28, 2008 05:00:28 PM	1391.800	PSIA

# *Federal 11-31-8-18 Rate Sheet (4-28-08)*

<i>Step # 1</i>	Time:	8:35	8:40	8:45	8:50	8:55	9:00
	Rate:	101.2	101.1	100.8	100.8	100.6	100.6
	Time:	9:05	9:10	9:15	9:20	9:25	9:30
	Rate:	100.5	100.4	100.4	100.4	100.3	100.3
<i>Step # 2</i>	Time:	9:35	9:40	9:45	9:50	9:55	10:00
	Rate:	200.7	200.7	200.7	200.7	200.5	200.5
	Time:	10:05	10:10	10:15	10:20	10:25	10:30
	Rate:	200.5	200.5	200.2	200.2	200.2	200.2
<i>Step # 3</i>	Time:	10:35	10:40	10:45	10:50	10:55	11:00
	Rate:	302.4	302.3	302.3	302.3	302.1	302.1
	Time:	11:05	11:10	11:15	11:20	11:25	11:30
	Rate:	302.1	302.1	301.7	301.7	301.7	301.7
<i>Step # 4</i>	Time:	11:35	11:40	11:45	11:50	11:55	12:00
	Rate:	400.9	400.9	400.9	400.9	400.7	400.7
	Time:	12:05	12:10	12:15	12:20	12:25	12:30
	Rate:	400.7	400.5	400.5	400.5	400.5	400.5
<i>Step # 5</i>	Time:	12:35	12:40	12:45	12:50	12:55	1:00
	Rate:	501.1	501.1	501	501	501	500.8
	Time:	1:05	1:10	1:15	1:20	1:25	1:30
	Rate:	500.8	500.8	500.8	500.7	500.6	500.5
<i>Step # 6</i>	Time:	1:35	1:40	1:45	1:50	1:55	2:00
	Rate:	600.7	600.6	600.6	600.5	600.5	600.5
	Time:	2:05	2:10	2:15	2:20	2:25	2:30
	Rate:	600.5	600.4	600.4	600.4	600.2	600.2
<i>Step # 7</i>	Time:	2:35	2:40	2:45	2:50	2:55	3:00
	Rate:	701	701	700.8	700.7	700.6	700.6
	Time:	3:05	3:10	3:15	3:20	3:25	3:30
	Rate:	700.4	700.4	700.4	700.3	700.2	700.1
<i>Step # 8</i>	Time:	3:35	3:40	3:45	3:50	3:55	4:00
	Rate:	802.2	802	802	801.8	801.8	801.8
	Time:	4:05	4:10	4:15	4:20	4:25	4:30
	Rate:	801.7	801.7	801.7	801.7	801.6	801.5



Federal 11-31-8-18  
Sundance Unit  
Step Rate Test  
April 28, 2008



Start Pressure: 1183 psi  
Instantaneous Shut In Pressure (ISIP): 1420 psi  
Top Perforation: 4322 feet  
Fracture pressure (Pfp): 1420 psi  
FG: 0.768 psi/ft

Step	Rate(bpd)	Pressure(psi)
1	100	1216
2	200	1258
3	300	1307
4	400	1357
5	500	1390
6	600	1422
7	700	1432
8	1200	1209



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

JUL 23 2008

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Michael Guinn  
District Manager  
Newfield Production Company  
Route 3-Box 3630  
Myton, UT 84502

RECEIVED  
JUL 28 2008  
DIV. OF OIL, GAS & MINING

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

RE: **Additional Permit Extension**  
EPA UIC Permit UT21025-06978  
Well: Federal 11-31-8-18  
Uintah County, Utah  
API # 43-047-34501

85 18E 31

Dear Mr. Guinn:

The Environmental Protection Agency (EPA) Region 8 has received your June 10, 2008 request for an additional extension of the referenced Class II enhanced recovery Injection Permit to conduct Part II Mechanical Integrity testing. The EPA will extend UIC Permit UT21025-06978 for an additional 120 days, commencing July 22, 2008, and ending November 19, 2008.

Please remember that it is your responsibility to be aware of and to comply with all conditions of the Permit. If you have any questions regarding this approval, please call Margo Smith at 800-227-8917, extension 312-6318.

Sincerely,

Steven J. Pratt, P.E., CAPM (inactive)  
Director, Groundwater Program

cc: Uintah & Ouray Business Committee, Ute Indian Tribe  
Curtis Cesspooch, Chairman  
Irene Cuch, Vice-Chairwoman  
Frances Poowegup, Councilwoman  
Ronald Groves, Councilman  
Phillip Chimburas, Councilman  
Steven Cesspooch, Councilman

Elaine Willie, Gap Coordinator  
Ute Indian Tribe

Chester Mills, Superintendent  
U.S. Bureau of Indian Affairs  
Uintah & Ouray Indian Agency

Larry Love, Director  
Energy & Minerals Department  
Ute Indian Tribe

Shaun Chapoose, Director  
Land Use Department  
Ute Indian Tribe

Gilbert Hunt, Assistant Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
U.S. Bureau of Land Management - Vernal Office

Eric Sundberg, Regulatory Analyst  
Newfield Production Company

RECEIVED  
U.S. BUREAU OF LAND MANAGEMENT  
Vernal Office  
JUN 10 1998



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

Ref: 8P-W-GW

DEC 02 2008

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Michael Guinn  
District Manager  
Newfield Production Company  
Route 3-Box 3630  
Myton, UT 84502

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

85 18E 31  
RE: **Authorization to Continue Injection**  
EPA UIC Permit UT21025-06978  
Well: Federal 11-31-8-18  
Uintah County, Utah  
API # 43-047-34501

Dear Mr. Guinn:

The Region 8 Ground Water Program office of the Environmental Protection Agency (EPA) received the results from the October 23, 2008 Radioactive Tracer Survey (RTS) used to demonstrate Part II (External) Mechanical Integrity (MI) in the Federal 11-31-8-18 Class II underground injection well. The results of the RTS were reviewed and approved on November 25, 2008, and the EPA has determined that the test adequately demonstrated Part II MI; that injected fluids will remain in the authorized injection interval at or below the Maximum Authorized Injection Pressure (MAIP) of **1415 psig**.

The EPA hereby authorizes continued injection into Federal 11-31-8-18 under the terms and conditions of EPA UIC Permit UT21025-06978 at an **MAIP of 1415 psig**.

You may apply for a higher maximum allowable injection pressure at a later date. Your application should be accompanied by the interpreted results from a Step-Rate Test (SRT) that measures the formation fracture pressure and the fracture gradient at this location. A current copy of EPA Guidelines for running and interpreting a SRT will be sent upon request. Should the SRT result in approval of a higher maximum allowable injection pressure, a new Part II MI demonstration must be run to show that the injected fluids will remain in the authorized injection interval at the higher pressure. Please note that to use a pressure greater than the **MAIP of 1415 psig** during a SRT and RTS, you must first receive prior written authorization from the Director.

**RECEIVED**

DEC 11 2008

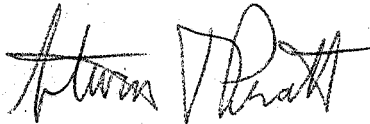
DIV. OF OIL, GAS & MINING

As of this approval, responsibility for Permit Compliance and Enforcement is transferred to Region 8 UIC Technical Enforcement Program office. Therefore, please direct all future notification, reporting, monitoring and compliance correspondence to the following address, referencing your well name and UIC Permit number on all correspondence regarding this well:

US EPA, Region 8  
Attn: Nathan Wiser  
MC: ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202

Please be reminded that it is your responsibility to be aware of and to comply with all conditions of your Permit. If you have any questions regarding this approval, please call Jason Deardorff at 800-227-8917 (ext. 312-6583). For questions regarding notification, testing, monitoring, reporting or other Permit requirements, Nathan Wiser of the UIC Technical Enforcement Program may be reached by calling 800-227-8917 (ext. 312-6211).

Sincerely,



for Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

cc:

Uintah & Ouray Business Committee  
Curtis Cesspooch, Chairman  
Ronald Groves, Councilman  
Irene Cuch, Vice-Chairwoman  
Steven Cesspooch, Councilman  
Phillip Chimburas, Councilman  
Frances Poowegup, Councilwoman

Daniel Picard  
BIA - Uintah & Ouray Indian Agency

Michelle Sabori  
Acting Director  
Land Use Department  
Ute Indian Tribe

Larry Love  
Director of Energy & Minerals Dept.  
Ute Indian Tribe

Elaine Willie  
GAP Coordinator

Gil Hunt  
Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Eric Sundberg  
Regulatory Analyst  
Newfield Exploration Company

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-74404
<b>1. TYPE OF WELL</b> Water Injection Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630, Myton, UT, 84052		<b>8. WELL NAME and NUMBER:</b> FEDERAL 11-31-8-18
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2007 FSL 1996 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 31 Township: 08.0S Range: 18.0E Meridian: S		<b>9. API NUMBER:</b> 43047345010000
<b>PHONE NUMBER:</b> 435 646-4825 Ext		<b>9. FIELD and POOL or WILDCAT:</b> 8 MILE FLAT NORTH
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 2/8/2013	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION	
<input type="checkbox"/> DRILLING REPORT Report Date:	OTHER: <input style="width: 100px;" type="text" value="5 YR MIT"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  5 year MIT on the above listed well. On 02/08/2013 the casing was pressured up to 2240 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 1246 psig during the test. There was not an EPA representative available to witness the test. EPA# UT22197-06978		
<b>Accepted by the          Utah Division of          Oil, Gas and Mining          FOR RECORD ONLY          February 26, 2013</b>		
<b>NAME (PLEASE PRINT)</b> Lucy Chavez-Naupoto	<b>PHONE NUMBER</b> 435 646-4874	<b>TITLE</b> Water Services Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/12/2013	

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 21 8/13  
Test conducted by: Chris Walters  
Others present: \_\_\_\_\_

-06978

Well Name: <u>Sundance Fed. 11-31-8-18</u>	Type: <u>ER SWD</u>	Status: <u>AC TA UC</u>
Field: <u>Monument Butte</u>		
Location: <u>NE/SW</u> Sec: <u>31</u> T <u>8</u> N <u>18</u> R <u>18</u> E/W County: <u>Uintah</u> State: <u>UT</u>		
Operator: <u>Newfield</u>		
Last MIT: <u>1</u> <u>1</u>	Maximum Allowable Pressure: _____ PSIG	

Is this a regularly scheduled test? ☒ Yes ☐ No  
Initial test for permit? ☐ Yes ☒ No  
Test after well rework? ☐ Yes ☒ No  
Well injecting during test? ☐ Yes ☒ No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 2240 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>1246</u> psig	psig	psig
End of test pressure	<u>1246</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>2240</u> psig	psig	psig
5 minutes	<u>2240</u> psig	psig	psig
10 minutes	<u>2240</u> psig	psig	psig
15 minutes	<u>2240</u> psig	psig	psig
20 minutes	<u>2240</u> psig	psig	psig
25 minutes	<u>2240</u> psig	psig	psig
30 minutes	<u>2240</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

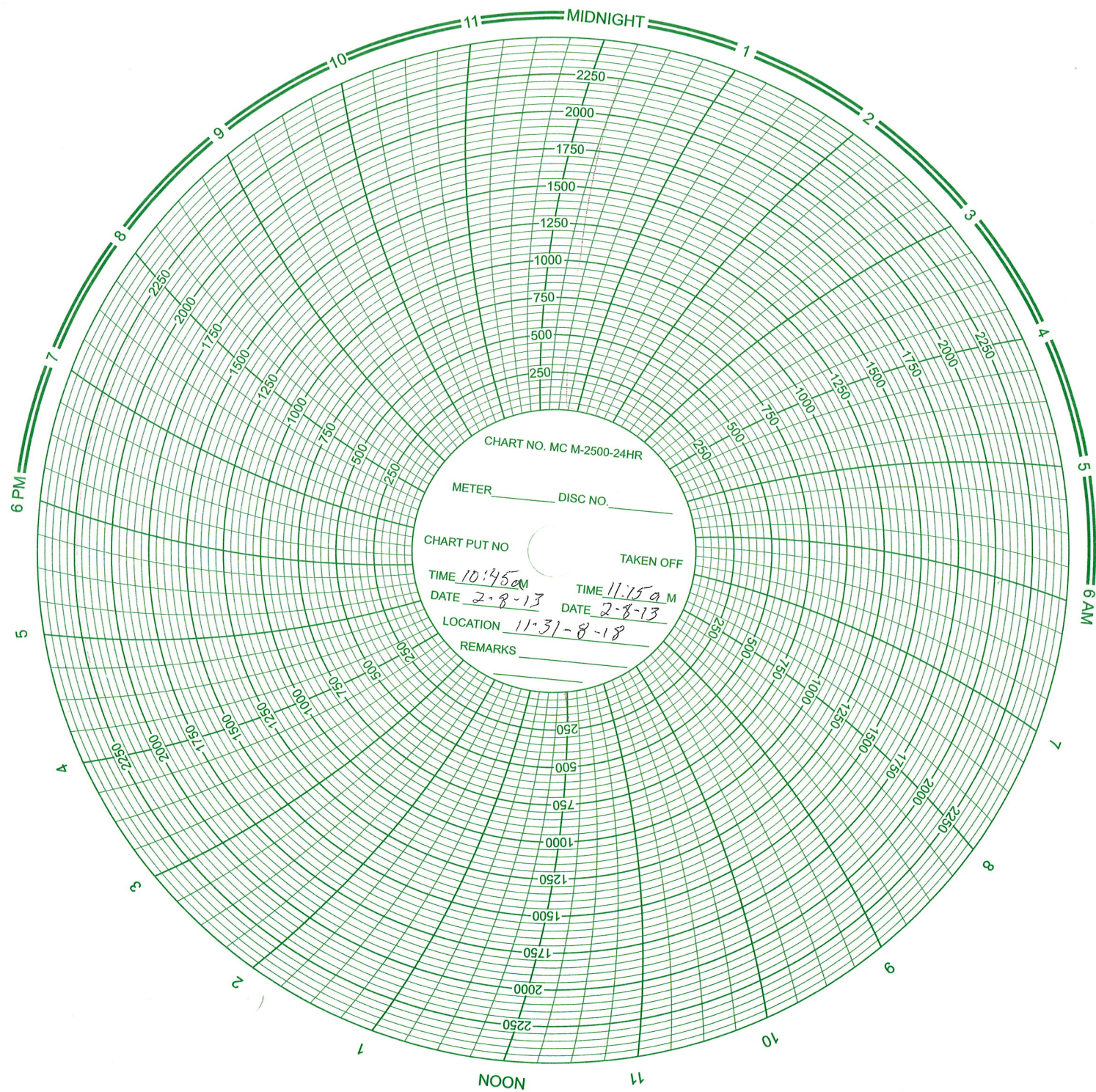
Does the annulus pressure build back up after the test? ☐ Yes ☐ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_







## NEWFIELD



## Schematic

43-047-34501

Well Name: Federal 11-31-8-18

Surface Legal Location 31-8S-18E		API/UWI 43047345010000		Well RC 500151257		Lease	State/Province Utah	Field Name GMBU CTB9	County UINTAH
Spud Date 10/9/2003	Rig Release Date 10/18/2003	On Production Date 11/12/2003	Original KB Elevation (ft) 4,994	Ground Elevation (ft) 4,982	Total Depth All (TVD) (ftKB) Original Hole - 6,143.4		PBTD (All) (ftKB) Original Hole - 6,096.7		

## Most Recent Job

Job Category Testing	Primary Job Type	Secondary Job Type N/A	Job Start Date 2/8/2013	Job End Date 2/8/2013
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TD: 6,179.0

Vertical - Original Hole, 9/15/2015 10:47:40 AM

MD (ftKB)	TVD (ftKB)	Incl (°)	DLS	Vertical schematic (actual)	
			DLS (°... 0 — 80		
43.3	43.3	0.0			3-1; Tubing; 2 7/8; 2.441; 12-43; 31.45
312.0	312.0	0.2			3-2; Tubing Sub; 2 7/8; 2.441; 43-68; 24.30
1,720.1	1,720.1	0.2			1; Surface; 8 5/8 in; 8.097 in; 12-313 ftKB; 300.79 ft
4,269.0	4,234.6	1.5			3-3; Tubing; 2 7/8; 2.441; 68-4,260; 4,192.39
4,334.0	4,299.5	1.5			3-4; Packer; 5 1/2; 2.441; 4,260-4,269; 8.85
4,440.0	4,405.5	1.7			Perforated; 4,322-4,334; 11/5/2003
4,898.9	4,864.2	2.1			Perforated; 4,428-4,440; 11/5/2003
5,122.0	5,087.1	1.9			Perforated; 4,890-4,899; 11/5/2003
5,134.8	5,099.9	1.9			3-5; Tubing; 2 7/8; 2.441; 4,269-5,655; 1,385.88
5,169.0	5,134.0	2.0			Perforated; 5,118-5,122; 11/5/2003
5,198.2	5,163.2	2.2			Perforated; 5,130-5,135; 11/5/2003
5,305.1	5,270.1	2.4			Perforated; 5,146-5,169; 11/5/2003
5,356.0	5,320.9	2.4			Perforated; 5,182-5,198; 11/5/2003
5,384.8	5,349.7	2.4			Perforated; 5,301-5,305; 11/4/2003
5,399.9	5,364.8	2.4			Perforated; 5,346-5,356; 11/4/2003
5,428.1	5,393.0	2.6			Perforated; 5,377-5,385; 11/4/2003
5,503.9	5,468.7	2.6			Perforated; 5,389-5,400; 11/4/2003
5,518.0	5,482.8	2.6			Perforated; 5,414-5,428; 11/4/2003
5,548.9	5,513.6	2.6			Perforated; 5,478-5,504; 11/4/2003
5,565.9	5,530.7	2.6			Perforated; 5,512-5,518; 11/4/2003
5,586.0	5,550.6	2.5			Perforated; 5,535-5,549; 11/4/2003
5,600.1	5,564.7	2.7			Perforated; 5,560-5,566; 11/4/2003
5,620.1	5,584.7	2.7			Perforated; 5,577-5,586; 11/4/2003
5,658.1	5,622.7	2.9			Perforated; 5,594-5,600; 11/4/2003
5,697.5	5,662.1	2.8			Perforated; 5,613-5,620; 11/4/2003
5,817.9	5,782.4	1.4			3-6; Sliding Sleeve; 2 7/8; 2.441; 5,655-5,658; 3.15
5,842.8	5,807.3	1.3			3-7; Tubing; 2 7/8; 2.441; 5,658-5,691; 33.17
5,929.1	5,893.6	1.3			3-8; Locator Sub; 5 1/2; 2.441; 5,691-5,698; 6.45
5,970.1	5,934.6	1.3			Perforated; 5,796-5,818; 11/4/2003
6,097.4	6,061.8	1.5			Perforated; 5,839-5,843; 11/4/2003
6,113.2	6,077.6	1.5			Perforated; 5,922-5,929; 10/29/2003
					Perforated; 5,961-5,970; 10/29/2003
					2; Production; 5 1/2 in; 4.950 in; 12-6,113 ftKB; 6,101.27 ft

# NEWFIELD



## Newfield Wellbore Diagram Data Federal 11-31-8-18

Surface Legal Location 31-8S-18E		API/UWI 43047345010000		Lease	
County UINTAH		State/Province Utah		Field Name GMBU CTB9	
Well Start Date 10/9/2003		Spud Date 10/9/2003		Final Rig Release Date 10/18/2003	
				On Production Date 11/12/2003	
Original KB Elevation (ft) 4,994	Ground Elevation (ft) 4,982	Total Depth (ftKB) 6,179.0		Total Depth All (TVD) (ftKB) Original Hole - 6,143.4	PBTD (All) (ftKB) Original Hole - 6,096.7

### Casing Strings

Csg Des	Run Date	OD (in)	ID (in)	Wt/Len (lb/ft)	Grade	Set Depth (ftKB)
Surface	10/9/2003	8 5/8	8.097	24.00	J-55	313
Production	10/17/2003	5 1/2	4.950	15.50	J-55	6,113

### Cement

#### String: Surface, 313ftKB 10/10/2003

Cementing Company BJ Services Company		Top Depth (ftKB) 12.0	Bottom Depth (ftKB) 312.8	Full Return?	Vol Cement Ret (bbl)
Fluid Description w/ 2% CaCL2 + 1/4#/sk Cello-Flake		Fluid Type Lead	Amount (sacks) 150	Class G	Estimated Top (ftKB) 12.0

#### String: Production, 6,113ftKB 10/18/2003

Cementing Company BJ Services Company		Top Depth (ftKB) 1,720.0	Bottom Depth (ftKB) 6,179.0	Full Return?	Vol Cement Ret (bbl)
Fluid Description w/ 10% gel + 3 % KCL, 5#s /sk CSE + 2# sk/kolseal + 1/4#s/sk Cello Flake		Fluid Type Lead	Amount (sacks) 285	Class Premilite II	Estimated Top (ftKB) 1,720.0
Fluid Description W/ 2% Gel + 3% KCL, .5%EC1, 1/4# sk C.F. 2% gel. 3% SM		Fluid Type Tail	Amount (sacks) 495	Class 50/50 Poz	Estimated Top (ftKB) 4,000.0

### Tubing Strings

Tubing Description					Run Date		Set Depth (ftKB)	
Tubing					3/5/2008		5,697.6	
Item Des	Jts	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)
Tubing	1	2 7/8	2.441	6.50	J-55	31.45	12.0	43.5
Tubing Sub		2 7/8	2.441			24.30	43.5	67.8
Tubing	129	2 7/8	2.441	6.50	J-55	4,192.39	67.8	4,260.1
Packer		5 1/2	2.441			8.85	4,260.1	4,269.0
Tubing	42	2 7/8	2.441	6.50	J-55	1,385.88	4,269.0	5,654.9
Sliding Sleeve		2 7/8	2.441			3.15	5,654.9	5,658.0
Tubing	1	2 7/8	2.441	6.50	J-55	33.17	5,658.0	5,691.2
Locator Sub		5 1/2	2.441			6.45	5,691.2	5,697.6

### Rod Strings

Rod Description				Run Date		Set Depth (ftKB)	
Item Des	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)

### Perforation Intervals

Stage#	Zone	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Phasing (")	Nom Hole Dia (in)	Date
8	GB4, Original Hole	4,322	4,334	4			11/5/2003
7	GB6, Original Hole	4,428	4,440	4			11/5/2003
6	D2, Original Hole	4,890	4,899	4			11/5/2003
5	B1, Original Hole	5,118	5,122	2			11/5/2003
5	B1, Original Hole	5,130	5,135	2			11/5/2003
5	B2, Original Hole	5,146	5,169	2			11/5/2003
5	A.5, Original Hole	5,182	5,198	2			11/5/2003
4	A3, Original Hole	5,301	5,305	2			11/4/2003
4	UpLODC, Original Hole	5,346	5,356	2			11/4/2003
4	UpLODC, Original Hole	5,377	5,385	2			11/4/2003
4	UpLODC, Original Hole	5,389	5,400	2			11/4/2003
4	UpLODC, Original Hole	5,414	5,428	2			11/4/2003
3	LoLODC, Original Hole	5,478	5,504	2			11/4/2003
3	LoLODC, Original Hole	5,512	5,518	2			11/4/2003
3	LoLODC, Original Hole	5,535	5,549	2			11/4/2003
3	LoLODC, Original Hole	5,560	5,566	2			11/4/2003
3	LoLODC, Original Hole	5,577	5,586	2			11/4/2003
3	LoLODC, Original Hole	5,594	5,600	2			11/4/2003
3	LoLODC, Original Hole	5,613	5,620	2			11/4/2003
2	CP2, Original Hole	5,796	5,818	2			11/4/2003
2	CP2, Original Hole	5,839	5,843	4			11/4/2003



## Perforation Intervals

Stage#	Zone	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Phasing (")	Nom Hole Dia (in)	Date
1	CP3, Original Hole	5,922	5,929	4			10/29/2003
1	CP4, Original Hole	5,961	5,970	4			10/29/2003

## Stimulations &amp; Treatments

Stage#	ISIP (psi)	Frac Gradient (psi/ft)	Max Rate (bbl/min)	Max PSI (psi)	Total Clean Vol (bbl)	Total Slurry Vol (bbl)	Vol Recov (bbl)
1	1,900	0.75	25.6	2,243			
2	1,950	0.77	25.3	2,331			
3	2,280	0.84	25.7	2,485			
4	3,600	1.1	27.8	3,710			
5	1,450	0.72	25.7	1,627			
6	1,920	0.83	26.3	2,064			
7	2,140	0.92	25.9	2,392			
8	2,230	0.95	25.7	2,610			

## Proppant

Stage#	Total Prop Vol Pumped (lb)	Total Add Amount
1		Proppant White Sand 45827 lb
2		Proppant White Sand 69844 lb
3		Proppant White Sand 251133 lb
4		Proppant White Sand 149764 lb
5		Proppant White Sand 119524 lb
6		Proppant White Sand 34828 lb
7		Proppant White Sand 39842 lb
8		Proppant White Sand 35873 lb